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MEDDA, ROBERTO

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Aristotle's *On Memory and Recollection*: Concepts, Sources, and Innovations of Aristotle's Account of Mnemonic Capacities and Activities

Roberto Medda

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Aristotle's *On Memory and Recollection*: Concepts, Sources, and Innovations of Aristotle's Account of Mnemonic Capacities and Activities

Introduction

The *De Memoria et Reminiscentia* (hereafter also, more briefly, *De Memoria*) is one of the treatises included among Aristotle's *Parva Naturalia*, and probably the most dense and difficult. It is strongly tied with the *De Anima* in many respects and represents at the same time a closer examination of a phenomenon neglected in the *De Anima* and a testing ground for some important ideas of that work, like Aristotle's theory of *phantasia*. Very briefly, the *De Memoria* deals with mnemonic capacities in humans and in some animals, which are divided into two main faculties, namely memory and recollection. The former is the capacity for retaining a trace of perceptual experiences and for distinguishing an actual internal presentation from one deriving from the past; the latter is the autonomous activity of retrieving the information stored in the memory trace after some time has passed.

In the last few decades, the *De Memoria* has been studied in particular for its relevance in Aristotle's psychological theory. In fact, the stimulus to undertake this research came via renewed discussion of this work. Firstly, 32 years after its first publication, in 2004 Richard Sorabji offered a new edition of *Aristotle On Memory*, in which he basically confirms his achievements and defends his interpretation from the criticisms it underwent. Secondly, in 2007 David Bloch released a very accurate critical edition of the text with an original interpretation of the main issues of the treatise and a study of its reception in Western Scholasticism.

My interpretation of the *De Memoria* will try to develop some themes from these important works and to reconstruct, as much as possible, a consistent Aristotelian theory of memory and recollection, which is in itself a very ambitious aim, considering the obscurity and even the textual corruption of many relevant passages of the treatise. In the first chapter, I will try to extend the analytical method used by Bloch (2007) to elucidate Aristotle's lexicon about the activation of memory traces to *all* the keywords of the treatise. I thought it was necessary to apply this analytical criterion, because some of Bloch's conclusions, which are remarkable on the whole, are compromised by lack of contextualization. Such contextualization suggests, in my opinion, a rather different interpretation of how Aristotle conceived mnemonic activities. Briefly, whereas Bloch contends that when Aristotle speaks of activation of memory he only refers to recollection, I think Aristotle meant to include both memory and recollection.

Sorabji's and Bloch's approaches are very different, but they share an interest in the reception of the *De Memoria* in later tradition. The treatise has been a milestone for the discussion and elaboration of mnemotechniques in antiquity and in the Middle Ages, but, inevitably, this aspect led the interpreters to emphasize the importance of artificial memory in a

work that seems much more concerned with the explanation of the mechanisms of memory rather than with the prescription of mnemonic systems. The second chapter of this thesis is then devoted to reconstructing the sources of Aristotle's theory of memory and how the techniques of memorization were used and studied in Greece before Aristotle. From this survey it emerges that Aristotle's interest in mnemotechniques should not be overstated in light of the importance of memory as a means to transmit cultural patterns or to establish new ones in the previous tradition. The attempts at contextualizing Aristotle's theory made by Lang (1980) and Coleman (1992) are limited to Plato and in comparison with him Aristotle is certainly more receptive toward mnemotechniques; however, considering the broader context of poetry and sophistry, his interest seems insufficient to make him the champion of those techniques. Actually, I think it is the other way round: Aristotle studied the natural mechanisms of memory and starting from them considered it possible to enhance one's capacities of memorization; in other words, the *primum* of his research is always a psychological problem, which may have practical consequences.

The third and last chapter focuses on the importance of the *De Memoria* within Aristotle's psychology. The treatise has been often regarded as the forefront of Aristotle's imagistic conception of *phantasia*. On the basis of the analogy with painting at 450a29-30, Sorabji (2006) and many other scholars have elaborated this interpretation considering the inner presentation of the past experience as an image within us. But this paradigm has been criticized in recent decades by many scholars; in this sense, an important contribution to the discussion is given by Nussbaum (1985), who radically questioned the visual nature of 'imagination'. I will try to include some of these criticisms in my interpretation of Aristotle's theory of memory so as to include 'images' related to all senses, and not only to sight, in memory. Another interesting issue is the recognition of the gnoseological role of memory among the other faculties. My reconstruction is obviously tentative to a large extent, since Aristotle does not focus on this topic; in fact the sources for the connection of memory with sensation, on the one hand, and with 'experience', on the other, must be looked for not in the *De Memoria*, but in the *Metaphysics* and in the *Posterior Analytics*. In addition, I will try to discuss some difficult passages of the treatise, summing up the most important interpretations and proposing, when possible, an original one.

In conclusion, my thesis aims at discussing all the main problems of the text, starting from some philological considerations concerning a text corrupted in several places, continuing with the contextualization of the treatise within the previous reflections about memory, and concluding with an analysis of the main philosophical issues. From this analysis, the *De*

Memoria seems to occupy a prominent role in Aristotle's psychology, even if its convoluted prose sometimes precludes a definitive reconstruction of its arguments.

1. Memory words and mnemonic activities

Aristotelian texts can be very difficult to interpret, not only for modern readers, but also for early commentators, and the *De Memoria et Reminiscientia* is no exception to this rule of thumb. The extant Aristotelian works were probably mostly notes for his lectures, and hence plenty of problems arise. The progress of Aristotle's line of reasoning does not always seem consistent, particularly on a first reading, and it is easy to find long and apparently superfluous digressions. Moreover, the vocabulary can suddenly switch from general meanings to very technical, pithy jargon within few lines and there are extremely versatile and ambiguous keywords – like πάθος and κίνησις, just to name but a few among those included in the treatise I have studied – which deserve special attention.

The aim of this section is to delimit and define as much as possible the meanings of the fundamental keywords. I think it is worth starting with such an attempt because the main interpretations of this treatise[1] diverge considerably on crucial points of the Aristotelian theory of mnemonic activities, not least because they assume, explicitly or implicitly, some specific reading of these words, sometimes at a high degree of elaboration.[2]

1.1 Μνήμη and cognates: "memory".[3]

Μνήμη is the first of three 'first objects' (with μνημονεύειν and ἀναμιμνήσκεσθαι) that Aristotle claims he will examine in the treatise: it is necessary to *define* it, *why* this phenomenon arises and in *what part* of the soul it is inherent (449b4-5). In accordance with this statement he will conclude that the purpose has been accomplished at 453b8-11. Strictly speaking, the exposition of μνήμη ends at 451a14-7.

Aristotle uses this word for two basic capacities: μνήμη is (a) the actual retention (and probably the potential for retaining – Aristotle uses a single word, ἕξις) in the perceptive part of a mnemonic trace, that can derive from a sensation or an intellectual apprehension and (b) the trace itself as being impressed at a particular time and possessing specific contents (πάθος).[4] I individuate the former acceptation (a) at 450a29-30, 451a14-6, 451b2-4, the latter (b) at 450b16-8, 451a21-3 (implicitly). However, μνήμη is a unitary phenomenon, which has

[1] Annas (1992), Coleman (1992), Sorabji (2006), Bloch (2007).
[2] Cf. Annas (1992).
[3] In chapter 1: 449b4; 449b15; 449b24 449b26; 449b28 (twice); 450a12; 450a23; 450a30; 450b2; 450b12; 450b17; 451a5; 451a12; 451a14. In chapter 2: 451a20; 451a22; 451a24; 451b4; 451b5; 453b7.
[4] It must be clarified that memory is only this quality of the traces, and not actually receiving or having them, that is sensation or knowledge. We are entitled to draw this conclusion from *Metaph* Δ 21, 1022b15-8.

three different aspects, strictly related: Aristotle uses three times the expression ἕξις ἢ πάθος (449b24-5, 451a23-4, 451a27-9) to cover the whole concept and employs them separately just to stress a particular facet that refers primarily to one of them.

Aristotle explains that μνήμη is neither sensation nor thinking because it arises only after a lapse of time (449b28): hence μνήμη is of the past (449b15), whilst prediction is of the future and sensation is of the present (449b10-15, 449b25-28).[5] This statement can appear almost self-evident, but it is not. Annas (1992: 301) starts from this passage to support her conviction that μνήμη means personal memory, that is a sort of resurgence of an episode from our past experience in the form of an image. She believes that this is the only way to avoid the untenable idea that Aristotle wanted to exclude from 'memory' many occurrences, such as "timeless truths" like 2+2=4. So this different kind of memories must be subsumed under ἀνάμνησις, considered as non-personal memory. However, Annas' solution does not seem to respect Aristotle's psychological background, if we examine the renowned claims of *DA* Γ 7, 431a16-7 and *DA* Γ 8, 432a13-4, duly presented again here at 449b31-450a1, that thinking necessarily involves φαντάσματα. Hence we cannot perform any mnemonic (or anamnestic as well) act or retrieval toward noetic contents of our traces abruptly, but we need an intermediate vehicle, located in our historical experience, both for our previous sense-perception and the objects of thought, although the latter are related with the past only indirectly.

Another remark on this – at first glance straightforward – passage is presented by Nussbaum (1985: 355-6). Translating at *MA* 8, 702a5 ἐλπίς with "hope" could lead us astray, while "anticipation" restores the symmetry between μνῆμαι and ἐλπίδες. In *Mem.*, only Mugnier translated "espérances", while most translators choose a milder rendering: "expectations" (Beare, Hett, Bloch) or "prediction" (Sorabji) are preferred, but neither of them properly stresses the consequences of this symmetry, as Nussbaum does.

As mentioned above, μνήμη implies a trace impressed on a semi-fluid bodily organ (453a22-3), that undergoes several alterations (450a11-12, 450a14, 451a16-17, 453a24, 453b1-2).[6] These alterations are the same as those involved in the operations of sensation, common sense and thinking, i.e. 'images' (φαντάσματα) (450a12-14). The difference between μνήμη and these faculties is that the latter consider the trace itself, in its representative and cognitive

[5] Actually, at 449b25-6 Aristotle says more specifically: τοῦ δὲ νῦν ἐν τῷ νῦν οὐκ ἔστι μνήμη. The expression νῦν ἐν τῷ νῦν is a *hapax* in the *corpus Aristotelicum*. I think that this phrase could be an implicit reference to what Sorabji (2006: 21, 91) and Annas (1992: 302) call the 'specious present' and refer to 451a29-31. This 'present at the present' (cf. Sorabji, *ad loc.*) entails a further specification: it is not only present, but 'this precise instant', in which the αἴσθημα is impressed; if a perception persists afterwards, it is *in virtue of* μνήμη, as the capacity for receiving traces, even if it is not μνημονεύειν (451a29-31), that is the representation of the same image after a lapse of time.

[6] Probably the heart, cf. Ross (1955: 237).

respect, while the former demands additional awareness that the experience stored in the trace belongs to the past (449b22-23, 450a20-21).

Since intellective faculties are not involved in μνήμη essentially, not even for memory of the objects of thinking (450a13a-14), but only incidentally (κατὰ συμβεβηκός), μνήμη belongs to some animals too, but only those which have perception of time (450a15-16).

Aristotle often advances empirical evidence and medical observations to ground and confirm his theoretical theses.[7] Slow-witted people have good memory, because their fluids do not wash away the memory organ and the trace easily persists, but they must not be too slow, or the hardened surface of the organ will not receive new traces; the young and the elderly do not properly acquire the imprint, the former for the rapid changes occurring in growth, the latter because their organ is decaying; too quick-witted people are similar to the young: the image cannot be fixed because of the movement their organ undergoes.

1.2 Μνημονεύειν and cognates: "remembering".[8]

Alongside the ideas of retention and alteration that memory implies, Aristotle must explain how humans (and many animals) are able to retrieve stored information. In order to do that, he needs to determine carefully which faculties govern mnemonic operations. As Labarrière (1984: 18) points out, defining borderline activities that hang between sensation and reason is critical in the recognition of the specificity that distinguishes humans from animals. Therefore Aristotle selects φαντασία as the most promising on the grounds of its ductility: perceptive, deliberative and intellective faculties, though with different roles, rely on its power for a correct working. So, it is possible to define the scope of the mnemonic capabilities of a being on the basis of the set of faculties it possesses: only humans will remember items derived from an intellectual activity, such as numbers, words and so on, whereas the animals that have perception of time will be able to retain only memories of their past perceptions.

The issue Aristotle wants to tackle in the first chapter is clearly expressed at 450a25-7, where he recognizes the intricacy of accounting for the main question related to memory: how could we remember something absent while we have an affection, i.e. whenever the content of the memory imprint is reactivated?[9] This could create severe problems in the Aristotelian

[7] 449b6-8, 450b5-11, 453a4-5, 453b4-7.

[8] In chapter 1: 449b4, 449b11, 449b16, 449b29, 450a27, 450b12, 450b14, 450b14-5, 450b19, 451a10-1, 451a15. In chapter 2: 451a28, 451a29, 451a30, 451a31, 451b1, 451b5, 451b16, 452a3, 452b5, 452b25, 452b26 (twice), 453a6, 453b8, 453b19.

[9] The rhetorical locution ἀπορήσειε δ᾽ ἄν τις, with which this question is introduced, may deserve some notice. Similar expressions are common – a little less than a hundred times in the *corpus Aristotelicum* – whenever

account, since he cannot solve them with a conception heavily loaded with rational capacities, like Plato did.[10] Experiential evidence that some animals, which lack intellect, can be tamed and somehow trained[11] leaves Aristotle no room for an essential use of intellectual activities in memory. So he draws his answer from another Platonic source, that is the wax block model, advanced as a hypothesis at *Tht.* 191d-197a and rejected by Socrates.[12] His theory could be roughly summarized as follows: first, external objects affect our soul through senses. But, since our experience seems to be persistent and not punctual, cognitive occurrences must be stored somewhere in our body. Indeed, this is clearly displayed by the claim that any event of thought takes place after a former representation from which it can derive its object. So Aristotle needs an intermediate capacity, upon which several faculties could rely, that collects and preserves sensorial data, even though in a decayed way (*DA* Γ 3, 428a11-6) in comparison with the precision of sensation of proper objects (*DA* Γ 3, 428b18-9), and that supplies raw material on which the intellect could perform its operations (again, *DA* Γ 7, 431a16-20; 431b2-17 and 8, 432a7-14).

In *Mem.* Aristotle does not focus on this topic at all, but simply refers the reader to the *DA* exposition of φαντασία. Some interest remains, however, in the negative explanation of why intellection cannot be essential for memory (449b30-450a25): hence, he ascribes memory to the same part of the soul to which φαντασία also belongs. Aristotle is not completely satisfied with this answer, because it concerns only the genesis of the trace, or, as I am trying to argue here, μνήμη.[13] Still, a new question arises: do we remember the affection, or the thing from which it was produced? (450b11-5). In other words, after an imprint has been sealed in us, in which modality could it be presented again? Clearly not *qua* affection, that is present and cannot convey any information about the temporal depth of its formation; nevertheless the alternative left is not immediately obvious. The solution lies in the double essence of the trace, that can be regarded both in its cognitive content and as a token of a past experience that

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Aristotle needs to stress a significant problem within a broader reasoning. However the very same expression reveals a peculiar kinship with other psychological works, like *DA*, in which it appears 5 times (410b10, 411b14, 423a22, 424b3, 429b22-3), and *Sens.* (446a20). For an analysis of this passage, cf. below, pp. 91-6.

[10] Cf. below, pp. 66-76.

[11] *HA* A 1, 488a26-31 (theory partly rectified in *PA* A 3, 643b3-8); E 13, 544a29-30. Particularly interesting in this respect is *HA* Θ 1, in which Aristotle considers the hierarchy of animate beings without implying substantial breaks between species. Here, like in the often discussed *Pol.* A 5, tamed animals seem to be regarded as the most similar to human beings. For a curious example of domestication, cf. *HA* I 46, 630b18-21: an elephant has been taught to kneel in presence of the king, because of the particular 'quick sensibility' (εὐαισθησία) and 'sagacity' (σύνεσις) typical of this species.

[12] Cf. below, pp. 70-3.

[13] Particularly revealing of the difference, subtly introduced by Aristotle, between memory and remembering is the nexus that links the two clauses of the "impasse" (Sorabji [2006: 50]): ἀλλ᾽ εἰ δὴ τοιοῦτόν ἐστι τὸ συμβαῖνον περὶ τὴν μνήμην, πότερον τοῦτο μνημονεύει τὸ πάθος, ἢ ἐκεῖνο ἀφ᾽ οὗ ἐγένετο; ("But then, if this is the sort of thing that happens with *memory*, does one *remember* this affection, or the thing remembered?" [Sorabji, italics mine]).

produced the trace. But in order to do so, Aristotle must admit that μνημονεύματα have additional information, beyond the data content, about the time in which they were created, unlike standard φαντάσματα[14]. Therefore, remembering involves only perception, both of the thing remembered and of the time elapsed, which allows Aristotle to attribute memory to animals that possess the capacity of perceiving time depth, even in a rudimentary way (449b28-30, 453a6-9, 453b9-10). However, nothing prevents those who possess superior faculties from remembering objects of scientific knowledge, but only accidentally (451a28-9).[15] In virtue of this distinction, Aristotle concludes in the first part of the second chapter the exposition of μνημονεύειν reasserting that remembering in itself (καθ᾽αὐτό) occurs only after a time-lapse and could not occur simultaneously with the original experience (451a29-31).

However, shifting perspective from regarding a representation in itself to considering it as a copy of something else entails a higher degree of error. Aristotle recognizes this structural weakness of remembering (451a3-4), describing both pathological deficiencies tied to specific diseases, like in the case of Antipheron of Oreus (451a9), and physiological failures, frequent in ordinary circumstances (451a2-14, 452b24-9).

Repeating once again that Aristotelian uses of such terminology is neither definitive nor cogent every time is not superfluous: at least three occurrences of μνημονεύειν need to be explained in a way distinct from the one here outlined and call for a revision of the level of specificity of the concept. In particular, at 452b5 ἀναμιμνήσκεσθαι or μεμνῆσθαι should be expected rather than the aorist of μνημονεύειν. The case here described is paradigmatically anamnestic: "for the same reason also when we have to remember a name, if we know a similar one, we blunder onto that" (Sorabji). Bloch (2007: 104) tried to reconcile this occurrence with his interpretation of μνημονεύειν as not denoting any kind of activity, but the periphrasis one should resort to is somehow captious ("when we have the state of remembering a name"), and he himself admits that interpreting μνημονεύειν as closer to recollection "may be more tempting" here. But, in this case, we need to interpret the word in a broader sense, comprehensive of both mnemonic and anamnestic performances. So, μνημονεύειν and μεμνῆσθαι can easily blunder one into another, although usually their meaning is distinct. An explanation of this occurrence of μνημονεύειν could lie in the fact that Aristotle derived these concepts from ordinary language, in which ὄνομα μεμνῆσθαι and ὄνομα μνημονεύειν

[14] In modern terms, our psychophysiological system is capable of metadata storage and restoration: cf. below, pp. 96-103.

[15] This claim is not surprising in light of *DA* B 3, 414b28-415a13, where upper capacities are said to rely on lower ones, like in the case of the succession of figures, and "in every case the lower faculty can exist apart from the higher, but the higher presupposes those below it" (Hicks [1907: 335]).

would be almost interchangeable; thus, the shortage of refined linguistic tools could have led Aristotle to mix these terminologies. The same explanation could be embraced for 451b1 and 451b16, where Aristotle suggests that a kind of μνημονεύειν is implied in recollection.

Quite different from this one is the case of 451b5, puzzling to the point that it is expunged from the text by most editors, because it has been seen as a serious threat to the structure of the whole argument. This occurrence is most probably an intrusive gloss, but it does not irreparably affect the argument, since recollection involves an activation of the trace as an intermediate stage, i.e. μεμνῆσθαι, which is a species of activation of memory traces like μνημονεύειν: in this sense, they share some characteristics.[16] Furthermore, Aristotle seems to commit himself to consider recollecting acts as reinforcement of mnemonic traces (451a12-4).

1.3 ᾽Αναμιμνήσκεσθαι and cognates: "recollecting".[17]

The last of the three objects of study mentioned in the opening, ἀναμιμνήσκεσθαι, is the autonomous retrieval of the cognitive content of a memory trace. This definition is uncontroversial, since it is stated at 451b2-5. Nonetheless, it has been often discussed and subject to original interpretations. A first striking remark is that recollecting is not acquisition (λῆψις) or recovery (ἀνάληψις) of memory: if the former is quite easy to understand – and Aristotle successfully demonstrates it with a likely antiplatonic hint[18] – the latter is not as clear as it is defended at 451a21-b6. In this case the argument is quite similar to Plato's (*Phil.* 34a-b): the acquisition of an experience in the broadest sense is not related to memory at all, since that acquisition could rely neither on a previous memory, because the subject is receiving the impression now, nor on the concurrent constitution of a memory, that requires a lapse of time for the emergence of the awareness of its temporal depth. Soon afterwards, Aristotle states again that what we acquire in the very instant[19] of the cognitive experience is only some

[16] Cf. below, pp. 21-9.

[17] In chapter 1: 449b6, 451a6, 451a12-3. In chapter 2: 451a18, 451b1, 451b4, 451b9, 451b10, 451b16-7, 451b23, 451b28, 451b29-30, 452a4-5, 452a8, 452a13, 452a28-9, 452b6, 453a6, 453a8, 453a10, 453a12, 453a17, 453a18, 453a20, 453a22, 453b3-4, 453b10.

[18] *Pace* Sorabji (2006: 89), it is really hard to believe that Aristotle in this passage does not have in mind and somehow criticize the Platonic theory of knowledge: perhaps he does not refer to any specific passage, but the necessity of clarifying the different background is manifest. If ever Plato admits recollection after prior forgetting, Aristotle all the more wants to point out his psychophysical conception of memory, that is farthermost from the Platonic view, and how only it allows for a proper account of forgetfulness and retrieval mechanisms.

[19] I am inclined to interpret τῷ ἀτόμῳ καὶ ἐσχάτῳ at 451a25-6 with a temporal meaning, rather than identifying some kind of reference to a specific organ – although it is not completely implausible (cf. Ross [1955: 244] who follows Sophonia *Mem.* 5,6.7.19, who reads ἐν τῷ πρώτῳ αἰσθητηρίῳ). If the consensus on the temporal meaning needs to be strengthened, just skimming through the preceding treatise *Sens.* reveals an unexpected kinship with this occurrence. In several places (447a13-4, 447b18, 448b19, 448b21-2, 449a3) we find similar expressions referring to temporal instant.

memory content. So the argument digresses from the main subject towards the description of what remembering in itself requires, i.e. a lapse of time that allows awareness of it to arise.[20] Only after this examination Aristotle gives his definition of ἀναμιμνήσκεσθαι. After that, the philosopher describes in what this activity consists at 451b16-8 and 451b29-31, in particular the former passage says: "whenever we recollect, then, we undergo one of the earlier changes, until we undergo the one after which the change in question occurs" (Sorabji).

So recollecting leads to the restoration of certain cognitive contents, but it is not learning or relearning: it is not the former, because Aristotle, as I have already claimed, holds a psychophysical conception of the memory trace formation; nor the latter, that is simply the consequence of the possibility of forgetfulness due to the disruption of the imprint. This last case is interesting, since recollecting and relearning seem hardly distinguishable from each other, as both of them presuppose a loss of information that is filled after a given time. The difference recognized lies in the degree of participation of the subject in the restoration of this piece of information: if it happens in concomitance with an external occurrence (δι᾽ἄλλου) that supplies again the lost content, that is a case of relearning, while if it happens exclusively through the agency of the subject (δι᾽αὑτοῦ), recollection occurs. Nonetheless these two activities partake of the same principle, though recollecting partakes of it to a superior degree.

The best interpretation of πλείονος ἀρχῆς at 451b9 remains Beare's "some spring over and above" (*ad loc.*), that explains a particular case of relearning not to be confused with recollection, but very close to it. With forgetfulness all data are usually lost and relearning implies that an – almost – identical imprint just replaces the old ones. But sometimes, one can have not only the same information again at his disposal again, but also the awareness that he has already had it some time before. In other words, the kind of forgetfulness implied in relearning sometimes consists in the retention of metadata regarding contextual information about the creation of a trace, whose content has been lost and now re-established. When relearning, we do not merely have the same information at our disposal again, but we can have the awareness that we have already had it.

The autonomy of recollective processes calls for further elucidations. Contrary to memory, they require the necessary intervention of intellectual capacities. For no animal can recollect,

[20] These lines seem to be the ones on the grounds of which Aristotle will assert at 453a6-7 that recollecting differs from remembering "not only in respect of the time" (Sorabji [2006: *ad loc.*]). Sorabji himself (2006: 111) refers to 451a31-b6 in explaining these lines, but he probably inverts the Aristotelian argument: "Remembering can occur without a substantial time gap after the original perception, learning, or experience. Recollection cannot". It has been also suggested (Bloch [2007: *ad loc.*]) that μόνον should be expunged as a hindrance to the understanding of that passage.

but only humans can (453a7-14).[21] Perhaps Aristotle, in theory, leaves some room for including some animals, when he claims that none "of the known animals" (τῶν γνωριζομένων ζῴων) is able to recollect; however, it cannot be determined to what extent this is methodological uncertainty or rhetorical redundancy. In any case, recollecting is an activity strictly akin to reasoning, οἷον συλλογισμός τις. Ross (1955: 252) ascribes this occurrence to a narrow logical context,[22] while Sorabji (2006: 111) weakens that strained interpretation arguing that "*sullogismos* (reasoning) is not confined to syllogistic reasoning". Indeed, recollecting resembles more a practical syllogism or a deduction than a logical inference and moreover Aristotle compares it with deliberation.[23] After all, Aristotle's comparison is mostly based on the strategies implied in recollecting and deliberating. As in deliberation the subject considers many strategies of action before choosing the right one to perform in order to achieve an aim, recollecting consists in the mobilization of our cognitive assets, through the arousal of many movements, until the one that precedes the actualization of this process occurs. This conclusion is confirmed by 452a7-10, in which Aristotle clearly recognizes the possibility of miscarriage of many attempts, until the right one is found.

Like any intellectual activity, recollection too requires a physiological medium to work on. In this respect Aristotle is again explicit in saying that recollecting means pursuing something within something bodily, in which the affection lies. He says this at 453a21-3, which can be considered the 'biological manifesto' of recollection, just like 451b2-5 is for the theoretical front. Furthermore Aristotle makes several remarks about the relation between recollective capacities and physical constitutions. The most important and convincing one regards the explanation of unsuccessful attempts. In the last part of the treatise Aristotle aims to demonstrate that the theoretical framework he has built is not only consistent with physiological structures, but also accounts for pathological events. In particular, Aristotle draws on his reflections about melancholy[24] and other diseases that affect recollection in some people.

[21] The same claim can be found at *HA* A 1, 488b24-6.

[22] Ross' reconstruction lacks flexibility and does not account for the entire process of recollecting. He recognizes as major premiss of the syllogism that "one has a general impression that a φάντασμα in one's mind must have a cause in previous experience" and the awareness of an actual representation as minor premiss. Therefore the conclusion is that one thinks this representation as caused by a previous experience. Only at this stage a search (ζήτησις) intervenes for that cause, and when it is successful, it leads to recollection. Now, this reconstruction is open to criticism. Firstly, recollection itself is ζήτησις (453a12), and not something ensuing from a previous search; secondly, the major premiss is purely Ross' conjecture, because the text does not give any hint of it, while it would deserve in-depth explanation by Aristotle.

[23] Precisely, συλλογισμός is used for describing deliberative searches in *EN* Z 9, 1142b22-6; 12, 1144a31-3, or at least λογισμός in *EN* Γ 5, 1112b20-4, Z 9, 1142b1-2.

[24] Cf. *Prob.* xxx 1. Even if it is not considered a genuine Aristotelian work, *Prob.* gives a trustworthy reconstruction of the Peripatetic position concerning melancholy, that is not too distant from the Hippocratic conception (*Nat. Hom.* 7; 15; *Aph.* III 14; *Aër* 10). Summing up, the spectrum of melancholic symptoms roughly resembles the modern polarization between hyperthymia and hypothymia: both classes denote an alteration of

Every obstacle those people run into is basically the same, i.e. once the recollective process has been set in motion, it is largely out of the subject's control. This event crops up in two different ways: sometimes, in particular in melancholics, the process cannot be stopped even if one wants to (it happens likewise with passions such as fear and anger); sometimes, on the contrary, an unbalanced weight in the upper parts, as dwarves[25] and children have, does not allow the recollective movements to persist and complete the task.

1.4 Μεμνῆσθαι and cognates: "recalling".[26]

The individuation of μεμνῆσθαι as a term that deserves a special place in the Aristotelian description of memory must be ascribed to Bloch (2007: in particular 85-109). This work is particularly interesting in the reinterpretation of Aristotelian terminology on memory, but the main concern of the author is clearly to shift Aristotle's use of μεμνῆσθαι from memory to recollection. In this section, I will assess the advantages and disadvantages of such an interpretation, so as to suggest my interpretation at the end.

It is true that the classification of the perfect tense of μνημονεύειν has never seriously been questioned, and there is no reason why it should be, given the nature of the verb. What could have aroused scholars' suspicions is instead the distribution of its occurrences, extremely unbalanced towards Chapter 2 of the treatise, which according to Bloch is the strongest argument for the reinterpretation of the meaning of μεμνῆσθαι. Bloch (2007: 91) breaks up his main argument into two, in order to defend better the core of his proposal: he seeks a wide consensus on the attribution of the verb to an anamnestic sphere, but at the same time he leaves room for further discussion on its precise meaning. In the definition of μεμνῆσθαι, Bloch condenses the two main aspects he recognizes in it, i.e. the dynamic power that leads the recollective process to its conclusion and the status of memory image it is supposed to have:

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normal constitution, but they are more often a mental disorder, rather than a proper illness, since some hyperthymic (and 'hot melancholics' as well) can achieve eminent social positions or demonstrate particular endowments. For a thorough account of Greek conception of melancholy, cf. Klibansky-Panofsky-Saxl (1964) and for a recent point of view about Aristotle, see van der Eijk (2005: 139-168).

[25] This remark on dwarfism is in step with *PA* Δ 10, 686 b 3-12; b 24-32. Here for upper parts Aristotle means the whole trunk, while in *Mem.* he specifically refers to the upper trunk, above the first sensorium. However, there is no contradiction between these texts, because the excessive growth of the trunk involves a superabundance of movements, which are the very reason for the disease here described.

[26] In chapter 1: 449b20. In chapter 2: 451b26, 452a7, 452a10, 452a16, 452a18, 452a20 (twice), 452a22-3, 452a24, 452b27, 452b28, 452b29, 452b30, 453a2, 453a3.

> [μεμνῆσθαι is] a dynamic state of having in oneself an object (=image) with the potential of moving the possessor to something that one has previously experienced, learned or thought (Bloch [2007: 88-9]).

In other words, μεμνῆσθαι represents the capacity for retrieving an item in an anamnestic chain through a different one: in that respect, this is Aristotle's solution to the problem of connecting different items without an explicitly embedded link. When one recollects an item, there is a 'moving potential' in it that leads to the right object and allows the process to be completed. Bloch's analysis of the one and only occurrence in Chapter 1 is exemplary of the progress allowed by his standpoint, but in general the suggestion of ascribing μεμνῆσθαι to recollection rather than to memory fits the text better than the alternative. Indeed Bloch's interpretation casts light above all on the definition of μεμνῆσθαι as a moving potential from the starting-point to the following one. Since now, it was problematic, comparing that with the nature of complete activity that μνημονεύειν seems to be attributed; on the other hand, μεμνῆσθαι is an operation that connects different items, but is not the core of recollection, since the final stage is the retrieval of the cognitive content of the trace and not of its link with other traces. Nevertheless, the two verbs share at least three basic characteristics: the content of both the operations denoted is an image; a time relation with the experience from which they derive; the representative feature of what they stand for, and, finally, they are both states, a remark not explicit in the text and yet important in the argument. But μνημονεύειν and μεμνῆσθαι cannot be confused, because the latter has not the "direct awareness" of the past event and, conversely, the former lacks the potentiality of moving a process beyond itself.

So far I have described the positive consequences of Bloch's proposal, but of course it is not immune from criticism. The author tends to overstress the difference between 'recalling' and 'remembering' to mark off a distinction never noticed before, but he does so on the risky grounds of terminology, since he claims that "μεμνῆσθαι is even closer to ἀναμιμνήσκεσθαι than to μνημονεύειν" (Bloch [2007: 93]). On the contrary, I think it is sufficient to refer to the stative and resultative value of the perfect tense of the verb to explain sufficiently the difference that Aristotle clearly points out with his careful choice of the terms, without forcing the distinction into a grammatical one. In that respect, Bloch emphasizes the tension between memory and recollection (in order to demonstrate that they are not two species of the same faculty, i.e. "memory") to such an extent that seems strange that Aristotle decided to treat those different capabilities in the same treatise. For example, in my opinion this strategy dictates Bloch's choice of denying any dynamism to μνημονεύειν (2007: 79-84), while it is difficult

to imagine that its essential representative nature could be conceived without an activity of any sort. So since Aristotle used an ambiguous, often interwoven, terminology, perhaps he did not intend to draw sharp distinctions, but to bridge the gap between μνημονεύειν and μεμνῆσθαι. Furthermore, if we discard the idea that μεμνῆσθαι is somehow related to μνημονεύειν, the author should explain why the former activity, like the latter, implies an image: the definition of μεμνῆσθαι is focused on the capacity for connecting traces, but it does not entail the intervention of an image to justify the link.

Another difficult passage for Bloch's argumentation is that he does not extend the attribution of this dynamic state to every intermediate step of an anamnestic chain, although Bloch maintains some uncertainty. It is clear that Aristotle is concerned in particular with the last link in the anamnestic chain and the realization of this dynamic potential could be estimated only when the process has achieved its goal, otherwise it dissipates. But Aristotle seems to extend a form of μεμνῆσθαι to the intermediate links. Considering 451b25-6 as a methodological position rather than a pragmatic assumption strains the text: in my own opinion Aristotle simply says that it is a loss of time to inquire on how a modular process develops from its farthest elements, while the analysis of the last module can be sufficient. Moreover, the last and strongest piece of evidence I offer is Aristotle's use of the verb throughout the example at the lines 452a17-26, both for the intermediate of the chain and for the final one.

In conclusion, as I have already mentioned, my attempt to reconsider the meaning of μεμνῆσθαι is based on the peculiar nature of the verb as a perfect tense. This tense expresses the result of an action or a state. Μεμνῆσθαι is not completely different from μνημονεύειν, because this word stresses the perfective character of the mnemonic activity involved in recollection. Briefly, in my opinion μεμνῆσθαι is nothing other than a peculiar kind of activation of the memory trace, in which the retrieval process does not stop in the moment it regains the previous experience together with the awareness of the time lapsed since the event that generated that cognitive content in the subject. While in remembering, this awareness is sufficient, in recalling it is not, since the recollective process needs to get through one or more items that are not the end of the search, but are not simply discarded;[27] on the contrary, since the recalled items are the new starting point for potential connections, the awareness of

[27] The example at 452a13-6 can deceive the reader. The items presented there (milk, white, air, moist, autumn) seem to follow one another arbitrarily, or at least weakly (even if Sorabji [2006: 104-5] tries to recognize a stronger link between moist and autumn, to which Rowe [1974: 195] adds white and air), but Aristotle's illustration aims to show how habituation, like a second nature, can affect and generate peculiar recollective chains in a subject, even starting from a rather low level of similarity. Obviously the stronger and the more natural the connection is, the better the recollective concatenation will be, like in the case of mathematical demonstration or arguments (452a2-4). Here the ease of transitions is grounded on the natural potential of the previous κίνησις to activate the successive one(s).

contextual information about the formation of the trace would hamper the subject and bind him to the contingency of the memory trace. In this sense, μεμνῆσθαι emerges as the dynamic potential to move beyond the activation of the image as related to its aetiological context: this element must be retrieved but will stay in the background for the rest of the process. In other words, a human being, once he has restored the movements both of the thing and of the time, discards one of them, in order to consider the cognitive content in itself, if the attempt is successful, or to connect this item with another having some degree of kinship: in this case the process is repeated, until the item sought is recollected. This procedure is the perfect reproduction for memory of what happens in thought. The claim I have already mentioned, that an act of thinking cannot be performed without an underlying φάνταsμα is an archetypical model on which recollection is based. Grasping a cognitive content out of a φάνταsμα implies a simplification and a deprivation of the residual contingency of it, till the intelligible can be abstracted.[28]

So far, my reconstruction seems to support Annas' (1992) interpretation. Indeed, her original interpretation of the treatise is far from being definitely overthrown because of its explicative power. Recognizing a sharp distinction between μνήμη as personal memory and ἀνάμνησις as non-personal memory does make a lot of sense and would solve many textual problems. For instance, it would explain the Aristotelian insistence on the higher complexity of the objects of recollection;[29] the weakness underlying Annas' main arguments resides, however, I believe, in the undervaluation of the zetetic rationale of ἀναμιμνήσκεσθαι, that is an incomplete activity, if considered in itself. Aristotle's focus is unequivocally on the retrieval procedures[30].

Annas (1992) interprets recollection as if it were an alternative species of memory and she devotes only one short footnote (310, n. 21) to the possibility of a process ending with the acquisition of contextual information from our past personal experience *as* object of recollection. This possibility is suggested on the basis of 451a5-7 (in which Aristotle reaches a peak in mixing up mnemonic and anamnestic terminology) and 453a10-2: since the movement of the thing and the one of the time must be recalled in every case, both of them can play the

[28] Cf. *DA* Γ 4; Γ 7, 431b2-5; Γ 8, 431b28-432a14. Cf. Cleary (1985: 13-45).

[29] Mathematical argumentations (452a2-3), chains of concepts (452a13-6), and single items, like names (452b4-6) are involved in recollection. Furthermore, if τὰς τοῦ τριγώνου ὅτι δύο ὀρθαῖς ἴσαι is not expunged at 449b20, this could be another excellent example. I find extremely tempting Gohlke's conjecture of translating, instead of secluding, this passage from 449b20 to 449b17, after θεωρούμενον. That solution would restore the balance of an argument in which an example of perception (τοδὶ τὸ λευκὸν) is counterpoised to one of scientific knowledge.

[30] This is the reason why I try to keep the noun and the corresponding verb apart: while Aristotle uses 23 times the verb, the noun occurs only 5 times in the text.

role of starting point for a new connection. For instance, as Bloch (2007: 73) suggests, a good starting-point in recollecting something could be an event chronologically close to it, instead of an item linked with it in some way. This seems to be the gnoseological consequence of the doubleness of time movements (452b29-453a2): if recollection happens "without a unit of measurement" (μὴ μέτρῳ), only the movement of the object could be used as a starting point for further search, but if we recall the exact time in which we had an experience, e.g. the day before yesterday (453a1), time-related information could supply a sufficient drive for retrieving contextual items as well as movements related to objects could do.[31] So once demonstrated the potential connectivity of time relations, nothing prevents us from including the reverse case: the aim of a recollective attempt can be the exact time of the day in which something has been experienced by the subject, recalling, for instance, the position of that experience between other events of the day, the time of which we happen to know. For these reasons I think it is inadequate to confine recollection within non-personal memory, even though non-personal memory is the more representative case, for Aristotle, of the demarcation between animal and human capabilities.

1.5 Ὅταν ἐνεργεῖν κατὰ τὸ μνημονεύειν; ὅταν ἐνεργεῖν τῇ μνήμῃ: "remembering in act".[32]

Another major breakthrough allowed by Bloch's interpretation is the renewed focus on the specific lexicon Aristotle used to describe activities 'towards memory'. Again, his standpoint gives remarkable clarification on the prominent value of those expressions in the treatise, but some explanations seem to be vitiated by Bloch's preliminary assumptions. For instance, the author tries to limit every kind of activity to anamnestic contexts in order to avoid the attribution of processes to remembering. So activation of memory traces, also in remembering, is left to autonomous retrieval procedures due to Bloch's contraposition of memory as a state (ἕξις) and recollection as an activity (ἐνέργεια) (2007: 79-109). In that respect, 'movements towards remembering' – this is Bloch's terminology to indicate what I call 'remembering in act' – becomes synonymous with one meaning of μεμνῆσθαι, in which its potential is completely realized in a state of remembering, conceived as an actualization: hence "the representation found in μεμνῆσθαι is logically prior to the state of having the representation as

[31] A plausible example could be the following: when someone asks me what I did yesterday at a specific moment of the day, I can answer by recalling the activity I *usually* do at that time or simply by reconstructing the sequence of events up to the one I want to recall. In those ways, the movement discarded is the one related to the objects, i.e. the representational content of the φάντασμα.

[32] In chapter 1: 449b22, 450a19-20, 450b17-8. In chapter 2: 452b24, 452b26.

a memory image" (Bloch [2007: 92]), a statement that implies to some extent a distortion of the Greek terminology, since the perfect tense of a verb is taken to precede a state denoted by the same verb in the present tense.

The outcome of a fully accomplished actualization of the potential of recalling seems to be for Bloch an activity that brings some content to memory or remembering, if the subject lingers on that result as long as it takes to 'fix' this potential in an abiding state, so I need not to recollect again one thing I recalled few hours ago, since a dispositional accessibility to this piece of information was retained (Bloch [2007: 75-6]). This conclusion is even more ingenious than Bloch's revision of the import of μεμνῆσθαι and Bloch's interpretation of many passages benefits from it, but that of others does not, and probably a definitive answer is a long way from being reached. In my opinion, there is at least as much evidence that the 'memory in act'-terminology could apply both to remembering and recalling, as for restricting it to the former.

On the one hand, considering the expression ὅταν ἐνεργῇ κατὰ τὸ μνημονεύειν as related to recollection could solve an old problem for commentators, namely the puzzling nature of the expression ἐν τῇ ψυχῇ λέγει ("one says in his soul") at 449b22-3, which forced the commentators to imply a semantic activity in memory. Sorabji (2006: 9-10) stresses the consequences of this argument and recognizes in Aristotle a tendency to exclude animals from memory, as empiricists did on the basis of the same argument. However, evidence in the text for the attribution of this capacity to some animals is too conspicuous[33] to be ignored and the passage to be interpreted should be the one now under examination. Annas (1992: 301-2) instead limits herself to highlighting the problem within an Aristotelian theory of knowledge, but together with a convincing analysis of the difficulties of Sorabji's view she does not offer a comprehensive account capable of replacing that one.

However, in the occurrences at lines 450a19-20 and 450b17-8, 'remembering in act' expressions are included in crucial descriptions of remembering. The latter, in particular, seems in contrast with Bloch's interpretation and is deliberately undervalued by him. The context clarifies that in this case the activation described is not the one implied in μεμνῆσθαι, but only the basic mnemonic capacity for 'perceiving' the image *qua* copy and not in itself. The mention of αἴσθησις is very important here, like at 450a19-20. In this section of Chapter 1 Aristotle resorts to a massive use of μνημονεύειν (four times in ten lines), which leaves no doubt about the activity he is referring to here.

[33] Aristotle confirms several times in the treatise this conviction (449b28-30, 450a15-9, 453a6-9) and it seems that he never questioned it, whereas the distance between memory and recollection – again associated with deliberation – is reasserted at *HA* A 1, 488b24-6; once more at *Sens.* 1, 436a6-11 memory is included among the capacities ascribable to animals in virtue of their psychophysical character. Almost certainly it is not one of the common affections, like sensation, but it is peculiar to some species, namely those which possess perception of time.

Furthermore, at 450a19-20 it is evident that the ὅταν ἐνεργῇ τῇ μνήμῃ-phrase is the culmination of an argument in support of attributing memory to animals. The activation here is characterized again as a kind of sensation, a προσαίσθησις[34] and, even if Bloch could argue that recalling as a state of having an image does not require intellective faculties in its representation, it does rely on a previous intellectual activity, i.e. recollection, that has supplied a content subsequently fixed in remembering as a lasting state. So it is very unlikely that Aristotle described animal capacities of remembering with the jargon of a mnemonic ability they do not share with human beings, namely recalling. At 449b18-23 the expression most probably refers instead to humans only. In all this long section (449b4-30), Aristotle makes preliminary methodological delimitations and empirical observations, outlines the main topics of the chapter, but always dealing with problems arising from ordinary experience. For that reason this example can be regarded as an approach to the reader's ordinary experience, while the delicate issue of animals that have mnemonic capacities is left for later discussion. So it is plausible that 450a19-20 is an extension of the 'remembering in act'-terminology to other forms of activation of the memory trace, after having considered which faculties are essentially implied in memory and remembering.

Therefore I argue that the activation of the memory trace conveyed by 'remembering in act'-expressions should be concerned both with remembering and recalling, although there are remarkable differences between them. Even if both rely on the same essential trait, i.e. they bring forward a mnemonic representation to the subject, they are different, since recalling is involved in a process which requires some intellectual intervention. However, unifying the two main mnemonic operations as species of the activation of memory traces seems a promising strategy to justify the dispositional possession of information as distinct from the representational moment in both activities:[35] in other words μνημονεύειν and μεμνῆσθαι activate in different ways the same dispositional content, which is latent until one of these

[34] The verb is a neologism coined by Aristotle and is a *hapax* in his own work, particular that is supposed to be a hint for considering it as a technical term.

[35] At *Sens.* 1, 436b3-6 Aristotle deals with this problem in a broader context, which is very important for recognizing the place of memory among the other capacities and testifies to his interest in retention. All the attributes of animals – sensation, memory, passion, appetite and desire – are ἕξεις or πάθη, but also σωτηρίαι or φυλακαί, or φθοραί or στερήσεις. In these last cases the philosopher certainly has in mind what memory should be at the lowest and broadest level: αἰσθήσεως σωτηρία, that is the same definition of memory given by Plato at *Phil.* 34a-b. Indeed, it is not sufficient to stress only the preservative role of those activities for the life of animals (Beare), even if in this passage Aristotle is also concerned with waking and sleeping, youth and old age, inhalation and exhalation, life and death, health and disease. In that respect, Ross (1955: 184-5) offers a valuable comment that follows Alexander of Aphrodisias, although the lines concerning memory are disputable: "memory and recollection are φυλακαί and σωτηρίαι of sensation, forgetting and death are φθοραί and στερήσεις of it". Apart from the suggestive juxtaposition of forgetting and death, the polarity well represents the physical nature of memory and forgetfulness, while the unforeseen inclusion of recollection needed some criticism: in so far as it is an activity upon the bodily trace, it does not concern its preservation or disruption, if not through a mnemonic activation, and this is the reason why Aristotle never mentioned it at *Sens.* 1, 436b3-6.

faculties bring it to one's attention. In conclusion, Aristotle describes with the lexicon of activation the two possibilities of representing the same trace with a temporal awareness, but they are not the only two ways. At 450b20-451a2 we can definitely assume that the imprint involved in memory, i.e. the φάντασμα with additional information about the time of the first acquisition, is ontologically the same as the one on which imagination and scientific knowledge rely:[36] those activities differ only under an aspectual standpoint, since the activation of the same movement[37] can constitute the premiss of both experiences. Thus, three different activities can arise from the same bodily trace: imagination or knowledge, if the subject considers the imprint in its cognitive content, remembering and recalling, if the additional time movement occurs.

This interpretation seems to have positive consequences for 452b23-9, a passage used by Bloch (2007: 100-3) in support of his reconstruction, although he is forced to break down the text in chunks which are not exactly obvious. His aim is to attribute the activation-lexicon to μεμνῆσθαι only.

> ὅταν οὖν ἅμα ἥ τε τοῦ πράγματος γίγνηται κίνησις καὶ ἡ τοῦ χρόνου, τότε τῇ μνήμῃ ἐνεργεῖ.—(1) ἂν δ᾽ οἴηται μὴ ποιῶν, οἴεται μνημονεύειν· οὐθὲν γὰρ κωλύει διαψευσθῆναί τινα καὶ δοκεῖν μνημονεύειν μὴ μνημονεύοντα. (2) ἐνεργοῦντα δὲ τῇ μνήμῃ μὴ οἴεσθαι ἀλλὰ λανθάνειν μεμνημένον οὐκ ἔστιν· τοῦτο γὰρ ἦν αὐτὸ τὸ μεμνῆσθαι.—ἀλλ᾽ ἐὰν ἡ τοῦ πράγματος γένηται χωρὶς τῆς τοῦ χρόνου ἢ αὕτη ἐκείνης, οὐ μέμνηται.[38]

It is not a matter of pedantry to discuss whether Bloch's way of segmenting the text is appropriate or misleading. I think that Bloch's division is skewed again towards his theoretical purposes. I will try to show that this passage is an attempt made by Aristotle to draw some epistemological consequences and to mark the difference between the two kinds of activation implied in remembering and recalling. The passages examined so far, I think, do not exclude

[36] Cf. Bloch (2007: 82), even if it does not consider the "mere retention" of the image as sufficient for defining memory.

[37] ὅταν ἐνεργῇ ἡ κίνησις αὐτοῦ (450b27-8). Maybe this occurrence is neglected by Bloch because of its relationship with remembering, but nevertheless it is strictly related to the other expressions of that kind not only in virtue of the verb ἐνεργεῖν, but also of ὅταν introducing the clause.

[38] "Thus, when both the movement of the thing and the movement of the time occur simultaneously, then one actualizes his memory.—(1) And if one thinks that he does, without really doing so, he thinks that he remembers; for there is nothing to prevent that one is deceived and thinks he remembers, when he is really not remembering; (2) but when one is actualizing his memory it is not possible that he does not think he is, but is unaware that he is recalling; for this is what recalling essentially was.—But if the movement of the thing occurs separately from the movement of time, or if the latter occurs separately from the former, then one does not recall" (Bloch [2007: 100-1]).

my understanding of the twofold nature of the activation, in fact they seem to support it. However, Bloch himself places a great deal of confidence in this last occurrence of the 'remembering in act'-phrase for demonstrating his interpretation.[39] A simplification of the argument in its nuclear items can help to reconstruct the line of reasoning:

(m): 'the movements both of the time and of the thing occur simultaneously';

(a): 'memory is actualized';

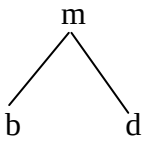
(b): 'the subject thinks that he is remembering';[40]

(r): 'the subject is remembering';

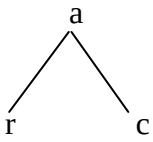
(d): 'the subject thinks that he is recalling';

(c): 'the subject is recalling'.

In my opinion, Aristotle does not seem to consider these propositions as coordinate, but structured in a relation of species and subspecies as follows:



where the stress is on the awareness of the subject who is having a mnemonic experience, specified in the particular cases of remembering and recalling, while the subdivision



is focused on the activation in itself. Therefore, (m) and (a) represent general processes that take place in mnemonic and anamnestic processes, (b) and (r) the instantiations respectively of (m) and (a) in remembering, (d) and (c) those concerning recalling.

Thus, Aristotle wants to test a first hypothesis:[41]

(1) m ↔ a.

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[39] Actually, one possible objection would invalidate Bloch's view from the beginning. He does not consider or mention the possibility that the object of οἴηται at 452b24 could be 'the condition in which one's memory is activated' and not 'remembering'. Thus interpreting the sentence as "if one thinks that his memory is activated, when it is not, then he thinks he is remembering" is possible and would automatically include remembering as a kind of activation. Actually, Bloch tries to keep the ambiguity in the text with a Beare-like translation, but most modern translators (Hett, Mugnier, Lanza and Sorabji) are more explicit and attribute the 'memory in act'-phrase to remembering (e.g. "if one thinks that he experiences these impulses [*scil.* the one relating to the fact and that relating to its time] without doing so" [Hett]). Nevertheless, Bloch denies this possible interpretation arguing that the scenario (1) only describes a case of deception about remembering and "there is no real mixing of terms [i.e. between recalling/activation and remembering] in the passage" (Bloch [2007: 101]).

[40] It will soon be clear that Aristotle does not question that remembering is an activation, but (b) may be more precisely "the subject is aware that he is undergoing a mnemonic activity" as well.

[41] 452b23-5: ὅταν οὖν ἅμα ἥ τε τοῦ πράγματος γίγνηται κίνησις καὶ ἡ τοῦ χρόνου, τότε τῇ μνήμῃ ἐνεργεῖ.

in which (m) can be both (b) and (d). He assumes this implication in its strong logical sense: there cannot be cases in which (m) is not satisfied and (a) is. But actually such cases can happen sometimes in remembering:[42]

(2) $\Diamond (b \wedge \neg r) \vdash \neg\Box (b \rightarrow r)$.

The biconditional implication (1) has not satisfactorily described the kind of activation involved in remembering, because there are cases in which (m) is satisfied and (a) is not, i.e. that one thinks that the movements are occurring without actually taking place. Therefore, a weaker implication replaces the first hypothesis:[43]

(3) $m \rightarrow a$.

But (δὲ) we can have another case of activation, i.e. recalling, in which (3) is not sufficient, because:[44]

(4) $a \rightarrow \neg\Diamond \neg d \vdash a \rightarrow d$.

In addition, this makes clear again for Aristotle:[45]

(5) $d \leftrightarrow c$.

This is the full demonstration that recalling reaches a perfect correspondence between the activity and the awareness of it that the subject must have, as in the cases of intellectual operations. The test for the biconditional implication (1) is satisfied because, since there cannot be found a single case in which the subject experiences both the movements without an effective activation of the trace, there is no essential difference between the awareness of recalling and actually recalling. *A fortiori* the other way round, i.e. (3), can be satisfied, because it was the necessary condition for every kind of activation.[46]

(6) $\neg m \rightarrow \neg c \vdash c \rightarrow m$.

In conclusion recalling requires a stronger affinity between the four elements, precisely an equivalence between the four terms (d), (m), (c) and (a).

It is reasonable to ask what Aristotle meant with this passage, and what my interpretation tries to clarify: probably an example could help to understand this. Let us consider two simple cases of 'remembering', "I remember I saw Coriscus yesterday" and 'recalling', 'I recall that 2+2=4'. So we have two activities, apparently interchangeable, the simultaneous activation of the movement related to the object and of that related to the time, that I called (m), and the

[42] 452b25-6: ἂν δ᾽ οἴηται μὴ ποιῶν, οἴεται μνημονεύειν· οὐθὲν γὰρ κωλύει διαψευσθῆναί τινα καὶ δοκεῖν μνημονεύειν μὴ μνημονεύοντα.
[43] It is not explicit in the text, but it is the obvious outcome of the combination of (1) and (2).
[44] 452b26-7: ἐνεργοῦντα δὲ τῇ μνήμῃ μὴ οἴεσθαι ἀλλὰ λανθάνειν μεμνημένον οὐκ ἔστιν.
[45] 452b27-8: τοῦτο γὰρ ἦν αὐτὸ τὸ μεμνῆσθαι.
[46] 452b28-9: ἀλλ᾽ ἐὰν ἡ τοῦ πράγματος γένηται χωρὶς τῆς τοῦ χρόνου ἢ αὕτη ἐκείνης, οὐ μέμνηται.

condition in which one's memory (i.e. the physical trace one has in one's soul) is activated. Aristotle observes that these two activities are the same only in recalling; for I can think I remember Coriscus without doing so, for example if I imagined meeting Coriscus when I was walking in the *agora* yesterday and I mismatch this act of imagination with my remembering an encounter with him which I never had. In this case, the movements take place, but no physical trace created by a past experience is (or can be) activated. Conversely, when I recall a piece of knowledge retained in a trace apart from the context of the experience that created it, I *must* have activated a trace, otherwise the object of knowledge I am contemplating would not be restored. Therefore, when I recall, there is no difference between thinking I recall and recalling, and between the occurrence of the movements and the activation of the trace. This has interesting consequences. When one restores a piece of knowledge from a trace, the related movements undoubtedly take place in him and there is no room for deception when one thinks he has recalled something; conversely, in remembering one has an additional awareness that can derive from the wrong attribution of temporal depth to a φάνταϲμα. In epistemological terms, we can consider how remembering and recalling differ: the product of an episode of recalling is a piece of knowledge restored from the trace and for that reason it is impossible to conceive an intermediate state: I have or I have not it; on the contrary, in remembering, there are several possible errors, confusions and misattribution of a temporal depth to the wrong trace, or to a trace that instead is only a φάνταϲμα, etc.

For Bloch this passage explains instead "how to proceed from the result of recollection to remembering" (Bloch [2007: 101]), but Aristotle's argument would be bizarre, because the two scenarios described should be inverted, since the first one – about remembering – can ensue from the second, about recalling, as a case of fixation of the content recalled in a lasting memory. On my reading the scenario about remembering is not related to the premiss concerning recalling.[47]

Another argument in support of my interpretation of this passage comes from contextualization. I follow Sorabji (2006: 108), who takes 452b7-453a4 to apply "to all remembering". Even after the revision required by Bloch's demarcation of recalling, that I accept, there is no need to consider this section as exclusively concerning recalling and recollection. At 452b7-17 Aristotle describes the very broad issue of analogy between external

[47] It is a controversial point for Bloch (2007: 102, n. 191) too, since the propaedeutical actualization essentially requires an awareness that can be lost when the process fully achieves its goal. But the justification produced, i.e. the fact that Aristotle is confusing the activation and its result, is too bold. Aristotle often used blurred terminology, but in this case he is strongly committing himself to describing the phenomenon of recalling *essentially* (452b27-8: τοῦτο γὰρ ἦν αὐτὸ τὸ μεμνῆσθαι). Simply, Bloch should admit that Aristotle is inconsistent here.

and internal objects and he draws a parallel between how we think size and shape and how we establish time-lapses. Now, in these lines there is no single occurrence of the word μεμνῆσθαι or its cognates, while Aristotle carefully avoids this verb and talks about the 'production' of a movement[48] from the coordination of the other two concerning the object and the time. But, as a matter of fact, the philosopher introduces a strong noetic terminology[49] and this obviously supports Bloch's reconstruction. However, at 452b23, a detour from the main topic, i.e. the acquisition of time with or without measure, takes place, since the double nature of time movements is explained only starting from 452b29 and this time with a pronounced recalling-lexicon.[50] Emphatically, we can ask ourselves what happened in between. My response is that 452b23-9 is a methodological digression about which kind of activation is worth studying.

Indeed, the following description of time-movements is related to these lines, since the safest ground for demarcating possible further discriminations within them is allowed by the higher epistemic level of reliability of recalling processes, in which there is no possibility of deception about those movements. With this articulated argument, Aristotle warns about the reliability of the time relationships involved in remembering, since these ones are sometimes liable to errors. Moreover, there are other obstacles to adopting them, since measured time-lapses imply a soul capable of applying numbers or orders to a continuum and then only humans can apply a μέτρος for estimating those spans.[51]

To justify the possible failures of mnemonic processes, Aristotle adduces some evidence from ordinary experience, and at 451a2-14 he analyzes the consequences of conceiving memory as regarding an image as a copy. The double *modi spectandi* allowed by a single trace is the fundamental mechanism of memory, but, at the same time, it increases the rate of error of memory. The commentary on this passage by Sorabji (2006: 85-7) is brilliant in the individuation of four problems, but the background I set obviously changes the scene. Aristotle considers the consequences of the fact that the same trace can be regarded as a φάντασμα or as a μνημόνευμα, depending on the aspect assumed each time from it. First, he seems to describe a case of déjà-vu, but applied to mental images and not to actual perceptions:[52] "when changes like this are produced in our soul as a result of former perception, we sometimes do not know whether this is happening in accordance with the previous perception, and are in doubt whether it is memory or not" (451a2-5: transl. by Sorabji). Here, one is deceived and thinks that an

[48] ποιεῖν is used twice (452b17; 452b19).
[49] νοεῖν and cognates are used seven times.
[50] Three times, in every occurrence Aristotle wants to convey the result of activation.
[51] Memory and recollection play an important role in creating ἐμπειρία (cf. below, pp. 87-91).
[52] Lanza (1971: 1128, n. 13) seems to be the only one to advance this proposal, even if he extends it to 451a5-8 regardless of the correlation ἐνίοτε…ὁτὲ, which suggests an alternative.

actual object of his imagination accords with one of our past, while it does not. The context is unequivocally bound up in αἴσθησις.

Then Aristotle says: "at other times it happens that we have a thought and recollect that we heard or saw something earlier. This happens when one changes from contemplating the image as the thing that it is to contemplating it as being of something else" (451a5-8: Sorabji). In this second case Aristotle considers recalling without mentioning it directly, but he uses ἐννοῆσαι and ἀναμνησθῆναι, words which immediately refer to recollection. Sometimes we can proceed in coordinating both movements involuntarily and activate the trace as a memory,[53] even if we are focusing on the item recalled. However, it does not necessarily imply any deception about it; on the contrary we only regain an additional piece of information, that can distract our attention towards it, away from the cognitive process meant to be retrieved.[54] This case is analogous to the one at 451a2-5, since in both of them the subject switches from considering the trace in itself to associating it with a temporal location.

The next two possibilities are the extreme consequences of these first examples.[55] In the first case, "Antipheron of Oreus and other mad people [...] used to speak of their images as things that had occurred and as if they were remembering them. This happens whenever someone contemplates what is not a copy as if it were" (451a8-12: Sorabji). Antipheron considers an image as something from his past: he lives in a perpetual state of deception, illness obviously serious to such an extent that Aristotle catalogues this man among those "out of themselves".[56] The case relative to recollection is quite singular: "exercises safeguard memory by reminding one. And this is nothing other than contemplating something frequently as a copy and not as a thing in its own right" (451a12-4: Sorabji). It is not a deficiency, on the contrary it is a way to familiarize oneself with the duplicity of the trace. The switch from regarding it in its nature to the contemplation of it as a copy, if it is often performed, reinforces the differences between the two directions towards activation and prevents deceptions. In this respect, it is even clearer that recollection does not admit delusion in virtue of its intellective nature.

[53] It is worth remembering again that recollection does not need to be intentional, but it is only an autonomous search, which can take place without one's drive, like in the case of melancholics.

[54] An example could be explicative. While we are reconstructing, for instance, a geometrical demonstration, it could happen that we regain the past moment in which we first apprehended a certain step. But it is not what our intellectual performance was demanding and we need to distract our attention away from that particular. Therefore, there is no need to conceive of this case of 'unrequested recollection' as of a deception.

[55] Aristotle says "on the contrary" (τοὐναντίον), but this does not seem exact, at least in the first example, that is a radicalization of the deception into a pathology.

[56] Ἐξισταμένοις (451a9). This word is again a *hapax* in Aristotle and it is only occasionally used in Greek medical terminology by Hippocrates (*Prorrheticon*, 1.14.2 and relative Galen's comment, *In Hippocratis prorrheticus I commentaria III*, 16.631.3) and once again in Galen (*De temperamentis libri*, III, 1.690.15)

1.6 ᾽Ανάμνησις and cognates: "recollection".[57]

᾽Αναμιμνήσκεσθαι is not the counterpart of ἀνάμνησις in the same way as remembering is of memory: the way in which the defining activities stand for the whole process differs. Remembering is exhaustive of the set of capacities embedded in memory, while recollecting seems to be the preliminary stage of seeking the right trace in an anamnestic process, after which it steps aside for recalling. So 'recollection' is composed of at least two different moments: one sets in motion several movements towards the memory trace he is looking for, and then 'recalling' focuses the attention on the piece of knowledge one wants to restore. This is a module that can be applied several times: if the piece of knowledge retrieved is not the one the subject wanted to recollect, it will be used as an intermediate item to approach the right one. Thus, as I have already argued above about Annas' (1992) interpretation,[58] 'recollecting' cannot be considered a fully-fledged faculty, as many scholars do.

Indeed, it is quite hard even to talk of 'recollection' in the usual sense attributed to it, in the light of a thorough analysis of the occurrences of the word. Firstly, ἀνάμνησις does not appear among the subjects of the treatise, neither in the opening nor in the conclusion. Unlike other elements, including μεμνῆσθαι, Aristotle never gives a definition of it and he only sporadically uses the term, while the focus is clearly on the dynamic nature of the activity, which is better conveyed by the corresponding verb. Another relevant feature in this respect is the number in which the noun is used. While μνήμη is conceived as a unitary phenomenon, and as a proof of this fact, it always occurs in the singular,[59] Aristotle uses ἀνάμνησις in the plural in two out of five occurrences.

Aristotle uses this noun to refer to the repetition of the same module in a concatenation in order to reach the one that allows us to retrieve what was sought from the beginning. In particular the occurrence at 451b10-1 (συμβαίνουσι δ᾽ αἱ ἀναμνησεις ἐπειδὴ πέφυκεν ἡ κίνησις ἥδε γενέσθαι μετὰ τήνδε: "acts of recollection happen because one change is of a nature to occur after another" [Sorabji]) could be translated "anamnestic chain" without detriment to the text. Moreover, not only in this case, but also for 451b20 and the section to which they belong (451b10-22), ἀνάμνησις is used to describe the succession of movements

[57] In chapter 2: 451a21, 451b10-1, 451b20, 452a1, 453a15.
[58] Cf. above, p. 21 and n. 31.
[59] It is striking that no occurrence in the singular can be found in 25 occurrences, while in the rest of the *corpus* the ratio is approximately one plural to five singulars. And actually, it will be necessary to discuss further the plural forms, in particular those of *Metaph.* and *MA*, because they seem to suggest a slightly different conception of memory, cf. below, pp. 87-91, in particular p. 89, n. 202.

which follow one another before the occurrence of the right one. The so-called 'rules of association' are described here as linking different kind of movements, while the goal towards which they are directed is left to further discussion, or at least is not the centre of Aristotle's attention. In virtue of this remark, the claim of lines 451b25-7, according to which there is no need to inquire further on the more distant links but rather it is sufficient to concentrate on the modules closer to the goal, represents a shift of perspective from regarding ἀνάμνησις as a whole to focusing on the part of it that is the aim of the process.

In the long section that extends into the chapter from this last occurrence to the final empirical observations of the treatise (451b28-453a4), the only occurrence of ἀνάμνησις is in the beginning of it and it is clearly related to the succession of movements that connects several πράγματα. After that, only ἀναμιμνήσκεσθαι and μεμνῆσθαι are used and they seem to represent the core meaning of the entire process: thanks to them it is possible to regain information by means of a coordination of movements as I shall analyse later.[60] In conclusion, ἀνάμνησις is excluded from this discussion and it only reappears at 453a15. Here, the distance between ἀναμιμνήσκεσθαι and ἀνάμνησις reaches its peak: the former in itself does not imply any achievement, but it is only a process through which the latter could be achieved.

Annas (1992) instead talks of 'recollection' throughout and tries to unify as much as possible the bulk of Aristotle's indications into a unitary complex. She emphasizes the outcome of the process and perhaps it is more correct to attribute her conclusions to recalling rather than to recollection. If we do this, Annas' interpretation can be reproposed with renewed strength, even if it remains a "bold one", because "Aristotle himself does not discuss the matter in these terms" (300). Indeed, even admitting that Aristotle used recalling to describe a non-personal memory, not every problem can be solved. In fact, it is true that in many cases recalling implies the retrieval of a piece of information separately from the memory of the acquisition of that particular content, but it can only be a preliminary operation on the trace, needed in order to locate the item within the metadata[61] – in which it is embedded and through which it can be retrieved. This passage cannot be eluded and then Aristotle can only come to conceive non-personal memory not independently from personal memory, but as an extension of this capability.

In addition, one of the arguments supplied by Annas is the priority of memorizing facts rather than experiences and she claims to be unsure whether it is possible – or useful – to

[60] Cf. below, pp. 96-103.
[61] Probably this is what Aristotle means with 'movements of the object' and 'movements of the time', see below, pp. 96-103 for a possible interpretation in this sense.

improve personal memories, even if Aristotle gives advice at 451a12-4 to preserve one's personal memory at best by recollecting it over and over (308). From my standpoint, this statement is not disturbing at all. Here Aristotle only reasserts once again his conception of mnemonic traces as a sort of 'magnetic field', in which the more times a subject goes along the trace again the firmer the connection will be for future efforts; for the subject will be able to separate the content and the aetiological context of the image he is having and, eventually, the personal memory of the event will become more definite and vivid.

The movement towards retrieval reinforces the material trace in which the information is imprinted and is the opposite of a 'movement towards forgetfulness'. In two very interesting parallel passages about the impossibility of changes of changes, *Phys.* E 2, 225b31-3 and *Metaph.* K 12, 1068a30-3, Aristotle says that in fact the subject is the one who undergoes the change, because sometimes he could change towards recollection, the result of which is scientific knowledge, some other times towards forgetfulness and, in this case, ignorance. These are not only generic suggestions, if they are read in the light of another passage, *DA* A 4, 408b15-8. Here Aristotle is dealing with the refutation of the idea that changes or movements must be attributed to the soul rather than to the whole human being. He seems to recognize in the ordinary usage a sort of synecdoche[62] that must be corrected, since some changes are not admittedly confined to the soul. Among those, he says that ἀνάμνησις is a movement that departs from the soul to affect the traces stored in bodily organs, in opposition with αἴσθησις, which goes in the opposite direction. Therefore from the same substrate different activities could lead to different results.

In step with it is also *Long.* 465a22-3, where recollection and learning are compared again, in contrast with forgetfulness and error, which are their corruption. Aristotle has an authentic psychophysical conception of memory and uses it in these passages as a theoretical tool for explaining other activities which can take place in the soul. In line with 451b8-10, recollection is not only above learning, but this gives it *raison d'être*, since learning presupposes both a lasting state after original apprehension and the possibility of autonomous retrieval of the content learnt, otherwise it should imply a new acquisition every time and it could not be called learning anymore. In the same relationship I conceive forgetfulness and error: the latter is somehow an active subspecies of the former.

[62] Of course, as Wedin (1988: 11) says, this "is not a plea for linguistic reform", but this arguments falls within the main argument's concern of tracing back psychic capabilities to the whole subject that carries out them. Cf. Polansky (2007: 112-7).

So we can reconstruct a unitary account of the bodily substrate on which recollection works. Recollection and learning[63] have a positive action of reinforcement or creation of the trace; they act on the organ deepening the imprint so as to give prominence to that connection for future attempts to re-establish it, to the detriment of other wrong paths: this conception, I believe, can account for the movement described in the *DA* passage, which originates from the soul and reaches its end in the body. Conversely, forgetting implies the corruption (φθορά) of the physical device that contains a piece of knowledge; this can happen if a trace is not recalled for such a long time that the movements which the organ undergoes wash away the patterns of possible connections leading to the trace and the trace itself; but it can also take place whenever some movements establish erroneous associations of information, i.e. errors, diverting the anamnestic efforts towards a wrong item.

Another consequence of this conception is worth noticing. The dynamic nature of the process supports what has been said before about the attribution of μεμνῆσθαι not only to the last successful stage, but also to the intermediate steps.[64] Considering error as an 'active forgetfulness' entails a more complex view of recalling, if we consider that it has also a physical effect. Errors originated by our autonomous attempts at recollecting equally affect the bodily apparatus as successful cases of recalling, even if they lead to adverse results. Thus, what actually defines μεμνῆσθαι is only the dynamic potential towards the objects one wants to recollect, no matter whether the objects retrieved are the right ones or not, and both successful and unsuccessful attempts have physical repercussions. If this is the common feature of recalling, the extension to the other steps of an anamnestic chain is the natural consequence. Indeed, it should explain what happens when undesirable results occur. As a vicious circle, a wrong path is more and more difficult to abandon the more we linger over it. Several examples are offered in the last part of chapter 2 (453a14-b7), but the most interesting is the one about melancholics and people who suffer excessive humidity in the part that houses the organ. In them, once a recollective process is set in motion, it cannot be stopped easily, since it does not find the movement that leads straight (εὐθυπορήσῃ) to what is searched for. However it could happen that the items recalled in between do not lead to the last one. Thus Aristotle recognizes that establishing some wrong connections could compel the subject to repeat the succession, even if he is trying to stop it, because a habit – grounded on a physical alteration – has been established. In conclusion, here also the physical potential of μεμνῆσθαι is expressed in the

[63] Certainly, some kinds of learning exclusively rely on intellective faculties, which are not located in any organ, but it is equally important to consider that each episode of thought requires a bodily substratum to work upon, and that these traces are modified, even if indirectly, also by intellectual activities: for instance, an imprint often used in abstractive operations will be 'deeper' than an inactive one.
[64] Cf. above, pp. 19-20.

succession from a link to another of the connection, even if it leads the process in wrong directions.

1.7 Πάθος and cognates: "affection".[65]

Our understanding of the meaning of πάθος is a keystone for a correct understanding of the entire treatise. Defining this meaning is difficult as a result of the extreme flexibility of the word and the diverse extent of its uses. In the *De Memoria* πάθος has one specific meaning and four more uses, but each one can be traced back to the same notion of 'alteration'. Obviously, it is impossible to catalogue these acceptations in a definitive way, but what I am going to outline must be regarded as a provisional guide to figure out the range of meanings which Aristotle is thinking of.

(a) Πάθος is a twofold alteration that occurs in the animal involved in a mnestic process: it covers both the material cause, i.e. the alteration of the bodily organ, which is produced by an internal or external experience, and the final cause, i.e. the representation produced by this alteration after a lapse of time, which is in itself remembering. At 449b5, 449b25, 450a13[66] (even if here the reference is, more generally, to the φάντασμα), 450b12, 451a26, 451a26-7, 451a28, Aristotle does not seem concerned to distinguish between these two functions, but we can easily grasp this distinction from those passages in which only one aspect is involved. On the one hand, at 450b5, 451a24 (twice), 453a15, 453a23, πάθος stands exclusively for the physical imprint, in the form of which memory is stored;[67] on the other hand at 450a26, 450b18, 450b32 Aristotle seems to convey the representational side of the word and in any case it refers just to remembering rather than to memory, as the second actuality of mnemonic activities. Aristotle is not interested everywhere in distinguishing these two meanings because they are usually merged for him and the representational facet issues simultaneously from the trace whenever a movement stirs it up. In this respect, the alteration and the representative capacity are the same in act.[68]

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[65] In chapter 1: 449b5, 449b25, 450a1, 450a11, 450a13a, 450a26, 450a30, 450b1, 450b5, 450b12, 450b18, 450b32. In chapter 2: 451a21-2, 451a24 (twice), 451a26, 451a26-7, 451a28, 451a30, 451a31, 451b2, 453a11, 453a15, 453a23, 453a28.

[66] Cf. *DA* A 1, 402a9, for a strict affinity with this peculiar reference, that seems to be poised between (a) and (c).

[67] Here Aristotle maintains the same procedure applied for sensation (*DA* B 5): the bodily organ undergoes an alteration from the object, because it is dissimilar; but since the alteration is received, the organ becomes similar (417a20: πάσχει μὲν γὰρ τὸ ἀνόμοιον, πεπονθὸς δ' ὅμοιόν ἐστιν): in conclusion the πάθος involved in this case represents the first actuality of the mnemonic capacity. I will not linger over the discussion of the mechanism of perception, which is a very controversial topic, cf Sorabji (1992) and Burnyeat (1992) and (2002).

[68] Once more a comparison with the *De Anima* and the theory of sensation therein put forward could be useful: ἔστι μὲν οὖν ταὐτόν, τὸ δ' εἶναι ἕτερον· μέγεθος μὲν γὰρ ἄν τι εἴη τὸ αἰσθανόμενον, οὐ μὴν τό γε αἰσθητικῷ εἶναι οὐδ' ἡ αἴσθησις μέγεθός ἐστιν, ἀλλὰ λόγος τις καὶ δύναμις ἐκείνου (*DA* B 12,

(b) At 451a21-2, 451a30, 451a31, 451b2, 453a11 πάθος means "what one has experienced" from anything which is capable of producing alterations, both external and internal. It can be used only for sensible experiences, in opposition with a superior intellectual acquaintance (451a21: μάθῃ), or more generically to include any experience that goes beyond sensation (451b2), or even to epitomize sensorial acquisitions, instead of enumerating them (451a30, 453a11).[69]

(c) There are also two occurrences (450a11, 450a13a) in which Aristotle uses πάθος in the sense of "property" or "quality", sense well documented in other Aristotelian works,[70] even though these occurrences could be also referred to (a), i.e. as the physical alteration.

(d) At 450a1 and 453a28 the word means in the broadest sense "state", "condition" or "phenomenon".[71]

(e) Πάθος at 450b1 deserves special mention. Commentators usually opt for evasive translations: Beare warily translates "passion" – partly followed by Ross, who means "emotion" –, Mugnier "impression",[72] Bloch "affection", everyone without further explanation; much better is Sorabji with "trouble", but the best understanding still remains Thomas Aquinas' "passio" with an impressively detailed following note: "hoc [*scil.* that memory does not arise] fiat *propter passionem* (vel corporis, sicut accidit in infirmis et in ebriis, vel anime, sicut in hiis qui sunt commoti ad iram vel ad concupiscenciam)" (1985: 113). Aristotle's point is just that memory can be affected *ex parte subjecto* by an internal condition, but in a broader sense than "disability" (Hett), an interpretation that forces Aristotle's purpose of describing a kind of failure into a permanent condition of inability. Furthermore, at *DA* Γ 3, 429a7 we come across a similar use, but it is revealing that there πάθος is separated from νόσος. In conclusion, "passion", or better "alteration", seems to be the most satisfactory translation.[73]

1.8. Ἕξις and cognates: "possession".[74]

424a25-8: "Thus the organ is one and the same with the power, but logically distinct from it. For that which perceives must be an extended magnitude. Sensitivity, however, is not an extended magnitude, nor is the sense: they are rather a certain character or power of the organ"; trans. Hicks [1907, *ad loc.*]).

[69] A very similar use can be recognized at *DA* A 5, 411b3.

[70] E.g. *DA* A 1, 402a9; 403a3; 403a16; B 7, 419a33; Γ 1, 424b25; 425a12; 8, 432a6; but also in *De sensu*: 445a9, 445b12.

[71] Cf. *DA* Γ 3, 427b18. Cf. *De Insomniis*, 459a28-9 for a construction very much similar to 453a26.

[72] The suggestion that here πάθος is a too strong alteration is tempting and supported by *DA* B 12, 424a28-32 (cf. Sisko [1996: 146-7]); however it would not be consistent with the context of this passage, even though Aristotle implicitly holds this position here when he says that the subject in which the trace is not formed is ἐν κινήσει πολλῇ.

[73] An equally ambiguous occurrence can be found in *De Insomniis*, 462b10.

[74] In chapter 1: 449b25, 450a30, 451a16. In chapter 2: 451a23, 451a27, 451b3.

῎Εξις is opposed to πάθος, as persistence is to modification, but Aristotle uses this pair of terms to define and describe memory (449b25, 451a23-4) and scientific knowledge (451a27-8). As I have already mentioned concerning πάθος (a), the alteration implied in memory (and in scientific knowledge) is a modification that realizes our nature and capacities, as Aristotle states at *DA* B 5, 417b14-6.[75] This sort of *alteratio perfectiva* must not lead us to believe that Aristotle uses ἕξις and πάθος 'interchangeably'.[76] It is undeniable that Aristotle is not clear in marking out this difference, but a closer look at the occurrences[77] in the treatise can authorize us to draw a distinction. For example at 450a30 Aristotle says that memory is the possession of a picture, or of a πάθος. Most probably Ross is right in bracketing πάθος, because it is likely a gloss; nevertheless, this is a very clever gloss, that underlines the necessity for the affection to last in order to be a memory: the same applies to 451a16 and 451b3, further occurrences that bear witness to the fact that this sort of formula must be regarded as a technical statement. Thus, three times Aristotle claims that memory is ἕξις of a content, whose acquisition Aristotle regards as a πάθος. Therefore equating these two words seems rash.

With ἕξις Aristotle indicates again a twofold reality, that is strictly related to πάθος, but has its own characteristics. Just as πάθος means both the alteration and the representational side of memory, ἕξις includes the natural capacity of some animals, which possess perception of time, of being actualized by the alteration caused by an experience; this alteration bears an 'image' of the object of the impression, but also a temporal structure that relates the trace to other πάθη. Furthermore this word denotes the state of having the image, previously stored: once again, these two aspects are the same in act,[78] but the emphasis is now on the duration and the permanence of mnemonic processes. In short, ἕξις and πάθος are complementary, not overlapping, concepts. Bloch's equation of ἕξις and πάθος does not properly consider that πάθος by itself could not guarantee the persistence of the physiological imprint, while ἕξις would understate the fundamental capacity for receiving traces and stirring them up again after a lapse of time. Moreover Bloch reduces this pair to their representative feature, while Aristotle is clearly concerned to address the issue of the preservation of the traces, even while the

[75] "Two modes of change should be assumed, one to the negative states and the other to the normal habits (τὰς ἕξεις) and the true nature" (transl. Hicks [1907, *ad loc.*]).
[76] *Pace* Bloch (2007: 81).
[77] In particular those in which ἕξις is used alone, and – as I want to argue – as a separate concept: 450a30, 451a16, 451b3.
[78] Aristotle probably adopts here the same difference about concerning something already used by Plato in the example of the aviary at *Tht.* 196d-199c. Plato distinguishes between possessing a piece of knowledge, namely having a bird in one's aviary, and having it in actual use, namely catching the same bird and having it in one's hand.

stimulus is absent (450a25-7; 450b11-20 – not to mention all the medical and physiological notes in the treatise).

1.9. Κίνησις and cognates: "movement" ("motion", "change").[79]

"For indeed movement is a kind of activity, although an incomplete one" (*DA* B 5, 417a16-7, transl. Hamlyn [1968, *ad loc.*]).[80] Aristotle considers κίνησις as a process towards an end, not as an end in itself, but the term is not used univocally in the *De Memoria*.

(a) First of all, movement is one – actually, the fundamental one – among the common sensibles (450a10) recognized by Aristotle at *DA* B 6, 418a17; Γ 1, 425a15-6 and *De Sensu*, 437a8-9. Thanks to perception of κοινὰ it is possible to have perception of time, that is essential for any mnemonic activity.

(b) The first type of κίνησις directly involved in memory is the alteration caused in us by the external object through sensation, as a seal does on a wax block (450a31, 450b2-3, 451b15). It brings about a physical alteration, that persists in our common sensorium as a πάθος. Too strong or simultaneous changes can prevent the shaping of the affection (450a32-b3); sometimes we can confuse the movement resulting from sensation with the one that is object of remembering (451a3).

(c) However, as witnessed by the distribution of the occurrences throughout the treatise, κίνησις is Aristotle's preferred tool in describing recollective activities. In fact, the best description of ἀναμιμνήσκεσθαι to be found in the treatise is at 451b17-8: "whenever we recollect, then, we undergo one of the earlier changes, until we undergo the one after which the change in question habitually occurs" (trans. Sorabji [2006], *ad loc.*). The retrieval of these 'movements', which Sorabji translates 'changes', has its prime cause in ourselves (δι᾽αὐτοῦ) and not in external reasons (452a4-7, 452a11-2).[81] But it is not entirely clear what κινήσεις are: my interpretation is that anamnestic movements create and re-create the connections and fill the gap between various πάθη; furthermore, they shape the unconnected bulk of sensations and experiences of the subject by mirroring external configurations of things and events or by

[79] In chapter 1: 450a10, 450a31, 450b2-3, 451a3. In chapter 2: 451b11, 451b12, 451b12-3, 451b14, 451b15, 451b17 (twice), 451b17-8, 451b20-1, 451b22, 451b24, 451b25, 451b29, 451b31, 452a2, 452a6, 452a9 (three times), 452a11, 452a11-2, 452a12, 452a21, 452a25, 452a27 (twice), 452b3, 452b12, 452b13, 452b17, 452b20, 452b23, 453a19, 453a22, 453a25, 453a26 (twice), 453a26-7, 453a27-8, 453b2, 453b5.

[80] The same concept is expressed at *DA* Γ 3, 431a6-7. For a complete examination of κίνησις, cf. *Metaph* 6, 1048b18-35; *Phys.* Γ 1, 201a10-2; 2, 201b31-2; *EN* K 4, 1174a13 ff.

[81] For Aristotle clearly points out that recollecting is neither sensation nor intellection: the former consists in being moved rather than moving (*DA* B 5, 416b33-4), and so it is not a spontaneous human activity; the latter is instead a state of quietness (*DA* A 3, 407a32-4), while recollecting is a kind of search (ζήτησίς: 451b30-1, 453a10-2) performed through one or more movements.

creating new connections.[82] Aristotle at 452a1-2 puts forward a fairly optimistic theory of knowledge: "for as the things are related to each other in succession, so also are the changes" (trans. Sorabji [2006], *ad loc.*). Thus, what a person does in recollecting is not only recovering a previous sensation or scientific knowledge, but doing this by going along the movements – in the sense (b) – that has been inscribed in us with the πάθος. For κινήσεις seem to be here the texture of our whole ἐμπειρία, what we can use to connect the traces of our experiences, otherwise unrelated. At the same time as we undergo the physical alteration, we also receive some 'metadata', both about the physical configuration and about the temporal coordinates, in which we received the alteration. This allows us to place a new trace inside the existing structure of our experiences. So, in recollection we can retrieve the content of a memory by reconnecting the movements it shares with other memory traces of which we are already aware.

As said above, those movements are related to each other in a sort of succession, like things or events are (452a1-2), and we recollect by following the links of a chain of successive movements related by nature (451b10-1). This does not mean that recollecting processes are ruled by necessity in all cases (451b11-3).[83] When changes occur ἐπὶ τὸ πολύ (451b13-4) – and Aristotle mostly describes this case – they are influenced by ἔθος, that can be caused by repetition (451a12-3), even though sometimes we can form a stronger habit on the basis of a single experience rather than repeated ones (451b14-6),[84] and by the nature of the things connected, naturally fitted one to another (452a2-4). The outcome of a recollection is not predetermined: for we can pursue different images from the same one we are examining and move in multiple directions (452a20-1, 452a24-6). What results is a sort of 'magnetic field' in which the poles, i.e. the images, gain their powers from habit (452a26-7) or from an external cause that attracts our attention towards them (452b3-6).

The movements connect things similar, opposite or neighbouring and they could be the same, but in other cases they are together or include a part (451b18-22). Of course it is very hard to understand what Aristotle wants to claim here,[85] how these connections could happen, but in particular the difficulty concerns the 'same movements'.[86] I argue that αἱ κινήσεις αὐταί are the movements that lead us directly to what we are looking for and put an end to that recollective search. I identify this kind of movement with that which occurs *after* the

[82] Cf. below, pp. 96-103.
[83] It is difficult to admit that there could be recollection ἐξ ἀνάγκης (cf. Sorabji [2006: 94-5]).
[84] Aristotle is often scrupulous in clarifying this, because for him it is evidence of the physical nature of the process that memory and recollection involve: see e.g. *DA* A 1, 403a16-25.
[85] Perhaps the difficulty does not concern the relationship between things, already considered in a similar way by Plato at *Phd.* 73d2-74a4, but chiefly the movements.
[86] Sorabji (2006: 98) mentions too briefly this central question, because it could not be squared with his account.

penultimate change in the definition at 451b17-8, which, otherwise, has no name. Otherwise, recollecting processes should be regarded as incomplete – from what the definition says – since they only seem to arrive up to the penultimate movement, because Aristotle fails to describe what happens then in the rest of the treatise, exactly as for the movements ἐξ ἀνάγκης, that raises the same problem. Perhaps Aristotle also gives for this kind of movement both a graphic representation at 452b17, i.e. the production of the movement ΓΔ,[87] and a physiological suggestion at 453a26 (οὐ γὰρ ῥᾳδίως παύεται κινηθεῖσα, ἕως ἂν ἐπανέλθῃ τὸ ζητούμενον καὶ εὐθυπορήσῃ ἡ κίνησις: "for once moved, the fluid is not easily stopped until what is sought returns and the movement takes a straight course" [Sorabji]).

(d) Aristotle often uses this kinetic phraseology to describe physiological incidents as well. At 450b1, 453a19, 453a26, 453b2 and 453b5 κίνησις is connected with and explains particular conditions due to age, emotions, like anger[88] and fear, or pathologies, like dwarfish constitution or melancholy,[89] that affect mnemonic retention and recollective activities.

But Aristotle also considers the physical implications of movements, since he who recollects moves and pursues in something corporeal (453a21-2). Thus, as for anger and fears, even if we can start this movement only by ourselves, nevertheless we set in motion something[90] that could have unforeseen results and can happen that the motion keeps up its course, although we arouse the opposite movement to stop it (453a2).

Now I shall try to summarise the main results of this chapter integrating them as a description of the mnemonic activities Aristotle considered in the *De Memoria*. Firstly, Aristotle's theory of memory is essentially 'empirical', in the sense that that in which our memories originate is an internal or external experience, which alters a physical organ in us and leaves a lasting trace of its occurrence. However, this is not sufficient, since the 'image' of the event could only represent an atemporal content, e.g. 'Coriscus'; what makes it possible to preserve a memory of an experience is that it must have at least a sort of 'label', which says that the 'image' I am contemplating comes from a past experience and not from an actual one.

This is not the only possible activation of the trace for a mnemonic activity. On the one hand, as we have already seen, one can 'remember', that is, have the awareness that the actual 'image' comes from the past; on the other hand, one can 'recall', that is retrieve a cognitive

[87] Cf. below, pp. 96-103.
[88] For anger as a movement, cf. also *DA* A 1, 403a26-7.
[89] These people undergo an excessive internal movement that makes the imprint fade faster than normal. But, if the excessive movement comes from the external object in particular internal conditions, the memory trace does not get fixed at all: cf. above, p. 17, n. 25.
[90] Aristotle talks about a sort of fluidity (ὑγρότης), that, once set in motion, is difficult to stop, until the recollective process comes to an end (453a25-6).

content from the trace. These activations differ because ‘remembering’ gives a temporal depth to an ‘image’ and leads us to consider it not in its content, but as derived from a past experience; on the other hand, ‘recalling’ does the exact opposite and diverts the subject from considering the trace as related to other ‘images’, either for the time of acquisition or the relation of their objects, to the informative content included in the imprint. This is the reason why Aristotle admits deception for ‘remembering’ and not for ‘recalling’: the former entails an additional awareness of the time lapsed that ensues from the contemplation of the ‘image’, but sometimes this kind of perception can be fallacious; the latter instead is essentially the possession of both pieces of information, i.e. the temporal coordinates and the content of the trace, from which I restore the sought item.

However, ‘recalling’ is only a part of the second mnemonic activity besides ‘memory’. More precisely, it is the final stage of ‘recollection’, which includes the preliminary operation of setting in motion several movements to connect the trace the subject is actually contemplating towards the one he is looking for.

2. Sources and resources of Aristotle's theory of memory

πύργῳ] δ᾽ ἐγκατέλεξεν ἐμὴν λίθον οὐδὲ τὸ γράμμα
ᾐδέσθη τὸ λέγον τόν [μ]ε Λεῳπρέπεος
κεῖσθαι Κῆϊον ἄνδρα τὸν ἱερόν, ὃς τὰ περισσά
··καὶ] μνήμην πρῶτος ὃς ἐφρασάμην
(Callimachus, *Aetia* 64, 7-10).[91]

The extraordinary complexity of the *De Memoria* leads, and has led in the past, to a consideration of the instruments Aristotle may have used for his theorizing in what is the first organic attempt to address the issue of mnemonic capacities in the history of philosophy. Lang (1980) offers a convincing reconstruction of the connections between Plato's reflections on memory and Aristotle's work. In her own words, "Plato's idiom is reinterpreted according to Aristotle's views, and so we find Platonic language impressed into the service of an anti-Platonic conclusion" (Lang [1980: 379]). In other words, Aristotle reworks some terminology and ideas discussed and rejected by Plato and uses them as cornerstones of his account. In particular the wax block model, discussed and then rejected by Socrates and Theatetus (*Tht.* 191d-197a) will become the archetype of the analysis of memory. Indeed the similarities are striking, but the very fact that this model is somehow rejected in the *Theaetetus* makes us suspect that Plato's pages are a criticism of a 'materialistic' model of memory probably common in contemporary Greece, and that the character Socrates is warning his interlocutors, both Theaetetus and the readers, against the adoption of it. In addition, how is it possible that Aristotle and Plato share the same terminology, but give such different interpretations? Or rather, are they trying to elaborate upon a common previous model in their account of mnemonic capacities?

On the other hand, a different guiding principle for the contextualization of the theories expressed in the *De Memoria* is the reconstruction of the potential audience of the work. In this case, the temptation to recognize Aristotle as the 'inventor' of the application of mnemonic techniques to public discussion (e.g. in the case of rhetors and orators) has been too strong. Coleman (1992) argues that Aristotle's conception of memory and knowledge, unlike Plato's, is compatible with the development of oratory and Aristotle is supposed to have supplied powerful instruments to rhetors to reach probable truths. For the utility of public discussions relies on this kind of truth: they cannot be demonstrated through arguments with the same rigour as scientific proofs, but nonetheless they are not 'sophistic rhetoric' and the orator is

[91] "He built my tombstone into a tower, nor did he reverence the epitaph which said that I [*sc.* Simonides], son of Leoprepes, the sacred man of Ceos was buried there, who (knew) rare things … (and) was the first to devise a system of memory (?)" (Trypanis).

allowed to appeal to the audience's emotions in order to display this kind of truth (Coleman [1992: 30]). However, as a matter of fact, Coleman does not – and cannot – use a single passage from the *De Memoria* when she moves from considering Aristotle's reflections on memory to describing the consequences that those theories may have on rhetoricians' skills.

Therefore two significant gaps can be found in the main attempts to contextualize this treatise. From a diachronic point of view, nobody has tried to connect Aristotle with any other thinker before Plato, also because of the shortage of comprehensive pre-Platonic treatments of memory. This is certainly true, because Plato and Aristotle were the first two philosophers concerned with addressing the memory of individuals, but I want to argue that their reflections emerge from a broader interest in cultural transmission and in collective memories, which considerable sections of Greek society demonstrated through the previous centuries, and that philosophers borrowed many concepts from those considerations to describe memory as an 'inner faculty'. From the synchronic side, however, the application of new theories of memory to important roles in the public life should be considered more carefully. Aristotle has been seen as the welded joint between mnemonic techniques and rhetoric, a fortunate path Roman authors will follow more and more. In my opinion, Aristotle completes a process of secularization of memory started between the end of the fifth and the beginning of the fourth century, in which Plato plays a relevant part. Aristotle reduces the influence of mnemonic techniques to very narrow sections of Greek society, whereas only a few decades before they were a pillar of the social space. In addition, now they assume the role, at best, of an aid for the orator for bearing in mind the structure of the argument or for similar cases, instead of the prominent function they presviously had in the preservation of a lasting cultural heritage.

2.1 Collective memory and oral culture

In this chapter I shall consider how memory was conceived by Aristotle's predecessors and more generally in Greek society and literature. Even if no organic treatment of this topic is extant, the impressive survey made by Simondon (1982) on the testimonies as far as the end of the fifth century reveals the complexity and the versatility of the concept of memory. Moreover, many studies have reflected upon the slightly different conception of memory in societies in which cultural transmission takes place through oral practices – that is the case of the pre-classical Greek age – and that this ability is a heritage of the social group rather than of the individuals. Actually, it has been questioned whether this model should be applied only to that kind of societies, and not to every human culture.

It is a matter of fact that in the last fifty years a stream of thinkers, mainly sociologists and anthropologists, has started to consider memory outside the narrow context of the description of an individual ability, in explicit disagreement with the mainstream psychological interests. Halbwachs (1992) was the first to analyse how internal models fail to describe this faculty because they start from the surreptitious hypothesis that human beings should be considered as isolated subjects, a widespread tendency that has somehow marked our culture in the modern era. On the contrary, in many cases the drive for recollection[92] is external and the society of which the subject is a member often presses the individual to reconstruct the past in pre-determined ways. Besides, this past is not in complete possession of the subject, because it relies on a social framework, a series of instruments which allows us to place the events of our lives in a coherent system: this is the reason why the coherence of one's memories is often achieved through several selections and distortions to the detriment of 'accuracy', since the efforts of reasoning stress the fragments of our experience towards a consistent and communicable plexus of sense. Halbwachs calls this plexus "landmarks", which are within us, but are inscribed all through our lives by social practices and relations and orientate our mnemonic performance. These landmarks are associations of chronological orders or meanings that the subject inherits from the cultural environment where he lives (Halbwachs [1992: 171-83]). Such a reconstruction of the past has been considered a source for the legitimation of social orders (Connerton [1989: 3-4]).

Greek society is no exception and recent studies have highlighted the dynamics of cultural transmission and its role in setting those landmarks. These affect in particular societies with oral methods of enculturation. For instance, Sakellariou (1990) is a remarkable study on oral traditions about migrations in pre-classical Greece. These traditions, transmitted by word of mouth generation after generation, undergo a complex process of erosion and alteration through the centuries. A representative example is the fictitious connexion of all Ionian people to Attica to justify the Athenian "imperialistic vision" (246). Therefore transmission is subjected to distortion and even construction, but some traditions belonging to declining social groups can fade and disappear (22-3). Their survival and continuity, however, depend on a group of specialists required to apprehend and reproduce a very diverse range of items, from cosmogonies to family genealogies. In many societies these figures, called by the scholars 'traditionalists', 'griots' or 'jeli',[93] transmit the historical legacy in highly ritualized performances: "to help them they use mnemotechnical devices. They undergo a long and

[92] Obviously in this chapter the use of terms like 'remembering', 'recalling' or 'recollecting' will be much looser than Aristotle's vocabulary.
[93] Cf. Hale (1998).

assiduous training" (21). An illiterate society makes use of cultivated individual memories to preserve social traditions and to satisfy the request of archiving the past.

In Greece this kind of roles was not confined to priests; poets and singers had the same duties, even if in a less institutionalized way. Thomas (1989) helps us to recognize the peculiarities of that system. The unsteady success of writing allowed the coexistence of both traditions late into the classical period. The author considers the case of Athens, but this case is surely representative of widespread customs; actually, it is likely that the adoption of writing penetrated into Athens more than most other places in Greece. But even there the reconstruction of the past remained to a large extent ahistorical and uncertain. For instance, familiar genealogies, often contrasting in chronological order, seldom trace back the ancestors beyond the third or fourth generation and then skip the intermediate links in the chain of successions to reach directly an Homeric progenitor. This practice, documented among the members of the aristocratic class, also involves the voluntary omission of inconvenient forefathers. Even with the appearance of written records the genealogists' reconstructions continued to imply the same operations of synthesis and distortion (Thomas [1989: 95-186, 284]).[94]

Having briefly sketched out this scenario, it should not be surprising that the goddess Mnemosyne is far from being a personification of the capacity humans possess individually. The goddess embodies rather "an impersonal memory; it is not concerned with the individual's past" (Vernant [2006: 134]). The past is a dimension beyond common experience and only a divine intercession can grant access to the knowledge of the mythical and cosmogonical origins of the society and of the world. On the other hand, memory shared by the group has a peculiar verificatory power conferred by divine sanction. Thus the several offspring of the goddess, later set definitively at nine daughters, reflects the specialization of the agencies of socialization in charge of guaranteeing the correct transmission and reproduction of an heritage, of which they are guardian, through artistic activities, although the Muses are often invoked anonymously. Again, this is not surprising, since the tragic chorus represents a collective subject.[95] Figurative arts are instead supported by Athena and therefore they are considered less influenced by

[94] Thomas (1989: 174-5) also reminds us that this use of boastful genealogies had been stigmatized by Plato at *Tht.* 174e-175b. This was part of a broader criticism of Athenian society: cf. below, pp. 58-63.

[95] For our purpose it will be sufficient to say that the tragic chorus must not be conceived as "an association of citizens" to whom the hero contrasts as an eccentric element (Vernant [2006: 24]), but more loosely as an expression of a homogeneous collective entity: however "the tragic chorus is never a random, *ad hoc* gathering of unconnected persons: it has the cohesiveness that only consciousness of a group identity, and of a wider community of which it is part, invariably gives it" (Gould [2000: 402 n. 89]). Simondon (1982: 232-8) reconstructs the evolution of the relation of the chorus with memory considering the works of the three great tragedians of classical Athens. In parallel with what I believe about philosophical thought, she construes the development of their conceptions of memory as a process of secularization.

inspiration (Small [1997: 73]), if this consideration is not to be taken as just a mark of a more practical and quasi-instrumental wisdom, embodied in the artists' craftsmanship or *technē*.

In the case of epic poetry, for instance, the relationship of memory with sight has prominent consequences for what has been argued so far and is worth considering briefly. The poet and the singer connect the audience with a shared past in a present representation, this past being shared because epic subjects are already known by the listeners, since they are included in the set of information constituting *paideia*; so the invocation to the Muses confirms a divine inspiration that enables them to gain direct access to past events and simultaneously reinforces and sanctions the bond between the singer and the audience. And yet, this reconstruction is not an automatic reproduction of traditional contents, but the poet is aware of taking part in the process of building the shared space of 'memory', of influencing the common notion of history through his decision to sing one episode from among the mythological traditions.

Of course this is not only a prerogative of epic 'authors', but of all the followers of the Muses. Firstly, historians have a prominent place in transmission, even if we should not confuse our conception of historiography with the Greek one. However, the *incipit* of Herodotus' *Histories* is evidence of the deep consciousness of his role in handing down the memory of those events to posterity, and at the same time it marks the transition to an extended record of deeds worth celebrating.

More distinctly this practice occurs in celebratory songs, for instance in Pindar's *epinikia*, in which the commemoration of contingent success keeps pace with the exaltation of the values of the *polis*, the diffusion of the winner's fame with immortalization of him and of the values he represents (Simondon [1982: 126-7]). I have chosen some significant verses among many others to show this peculiar relation between memory and the Muses. The poet's art is devoted to him who exalts the city and to keep the memory of the triumph alive; his duty is directly linked with divinity. Thus, the outstanding merits of the winner are the *cause* of the songs, but nobility of actions alone is not capable to prevent oblivion:

> εἰ δὲ τύχῃ τις ἔρδων, μελίφρονʾ αἰτίαν
> ῥοαῖσι Μοισᾶν ἐνέβαλε· ταὶ μεγάλαι γὰρ ἀλκαί
> σκότον πολὺν ὕμνων ἔχοντι δεόμεναι·
> ἔργοις δὲ καλοῖς ἔσοπτρον ἴσαμεν ἐνὶ σὺν τρόπῳ,
> εἰ Μναμοσύνας ἕκατι λιπαράμπυκος
> εὕρηται ἄποινα μόχθων κλυταῖς ἐπέων ἀοιδαῖς (*Nemean* VII, 11-6).[96]

[96] "If a man have good hap in his attempt, he throweth into the Muses' stream sweet cause of song: for even deeds of might for lack of song fall into deep darkness, and in but one way have we knowledge of a mirror for fair deeds, if by the grace of Mnemosyne of the shining fillet they attain unto a recompense of toils by the sound of voice and verse" (Myers).

This passage is particularly interesting for our inquiry, because it displays an elaborate dialectic of visual and auditory memory. The feats everyone saw in the games are bound to be forgotten without a song to preserve them; the resulting blindness can only be healed by the illuminating property of the Muse. The poet mirrors this light by an auditory medium, but this one is raised to a quasi-visual status by means of divine inspiration. On the other hand, the individual by himself, as it is stated a little further on, seems to be inclined toward forgetfulness and incapacity of discerning genuine glory from false, that is again represented with the image of a 'blindness of heart'.[97] In what does the memory of the poet consist, then? Pindar describes it as inscribed like a 'heart-writing' that, once forgotten by the poet, can only be revived thanks to the reading (ἀνάγνωτε) of the Muse, who reminds him of his duty to sing:

> τὸν ᾽Ολυμπιονίκαν ἀνάγνωτέ μοι
> ᾽Αρχεστράτου παῖδα, πόθι φρενός
> ἐμᾶς γέγραπται· γλυκὺ γὰρ αὐτῷ μέλος ὀφείλων
> ἐπιλέλαθ᾽· ὦ Μοῖσ᾽, ἀλλὰ σὺ καὶ θυγάτηρ
> ᾽Αλάθεια Διός, ὀρθᾷ χερί
> ἐρύκετον ψευδέων
> ἐνιπὰν ἀλιτόξενον (*Olympian* X, 1-6).[98]

However, it has been demonstrated that the bond of sight and poetry is tightly rooted in epic poetry. Divine inspiration of Mnemosyne, connected with Apollo's gift of interpretation, let the poet gain a "second sight" on past, present and future events, a privilege he shares with the prophets (Vernant [2006: 116-7]). It is not surprising, then, that this capacity dulls sight of the external world for a more authentic kind of vision: indeed, tradition passed on many figures of blind poets and prophets, starting from Homer himself, to Tiresias and the old Oedipus, who receives those gifts after a dreadful self-mutilation.

Actually, the poets' art seems to lie in their capacity for evoking images through words.[99] But access to the divine plane allows them to do that both in an objective and in a subjective sense within the poem. Firstly, they present to the audience not a mere description or narration of what happened in the past, but they use several figures of speech to convey a 'neutral'

[97] τυφλὸν δ᾽ ἔχει / ἦτορ ὅμιλος ἀνδρῶν ὁ πλεῖστος ("Blind hearts have the general folk of men" [Myers]) (*Nemean* VII, 23-4). Cf. also *Isthmian* VII, 17: ἀμνάμονες δὲ βροτοί.

[98] "Read me the name of the Olympic winner Archestratos' son that I may know where it is written upon my heart: for I had forgotten that I owed him a sweet strain. But do thou, O Muse, and thou Truth, daughter of Zeus, put forth your hands and keep from me the reproach of having wronged a friend by breaking my pledged word." (Myers).

[99] The connection between writing and image will be central in Plato's model of memory at *Phil.* 34a-b, cf. below, pp. 73-5.

content. The important contribution of Rubin (1995: 39-64) makes clear the role of imagery in oral traditions and Minchin (2001) and Bakker (2005) have applied this result to Homeric poetry. The frequent use of similes and epithets, the constant resort to deixis and anaphorae contributed to the fame of "graphic vividness"[100] – or *enargeia* – which Homeric poems have earned since the classical age. For instance, the strategy of the similes is to enhance the memorability of an item through its representation as an image the listener can picture before his eyes (Minchin [2001: 132-3]).

However, the use of imagery to which the Muse gives access is not confined to the artistic rendering in the performance, but it is an invaluable mnemonic aid for the moment of production and reproduction of an epic poem. The idea of the use of a formulaic set of expressions in oral traditions, initially studied by Parry (1971) and Lord (2000), is now generally accepted and deeply studied in Greek literature too. Formulas are often used as reminders in the course of the narration and they offer precious solutions within metrical schemes; in addition, for the singer these stereotypical expressions constitute a pause during the performance, giving him the time necessary to recollect the following verses. Thus the Muse also presides over the mnemonic facet of composition and declamation and, as Vernant (2006: 118-9) has pointed out, invocations to the divinity happen to precede very demanding pieces in terms of memorization skills, like catalogues, pieces that at the same time have a particular importance as dense sources of information about the past.[101]

Obviously this framework did not go unchanged through the centuries until the definite success of written records. A pivotal figure in my brief survey on Aristotle's sources for his theory of memory is Simonides of Ceos, not only for his supposed invention of the influential 'place-system'.[102] With a bold parallel, he represents for poetry what the sophists had been for philosophy. According to a series of testimonies springing from some verses by Aristophanes (*Pax* 695 ff.),[103] Simonides is the first poet to ask remuneration for his compositions. Aristotle sarcastically comments on this at *Rhet.* Γ 2, 1405b23-8, but Simonides was commonly censored as an example of meanness.[104] Thus, his invention of a place-system can fall within the same process, in which techniques embedded in centuries-old practices are now pinpointed and studied in themselves, just as poetry became a pragmatic instrument of exaltation of the client,

[100] Cf. Bakker (2005: 63 and *passim*). Ford (1992: 46) even claims that vividness is the "purpose of poetry".
[101] Cf. also Minchin (2001: 86-7).
[102] For a valuable introduction to his work see Bowra (1961: 308-72).
[103] A scholiast quotes a reply by Pindar in *Isthmian* X, 10: "For the Muse was no seeker of gain then, nor worked for hire…" and another scholiast on this passage writes that the custom of composing *epinikia* by pay began with Simonides. For the sources on Simonides' life I use in particular Edmonds (1922-7).
[104] Plut. *Sen.* 5; Stob. *Fl.* X, 62; *Hibeh Pap.* 17; Stob. *Anth.* 2, 42; Ath. 14, 656d. Cf. Edmonds (1922-7). See also the scathing words used at *Rhet.* B 16,1391a8-14.

instead of the whole community. Yates (1966: 1-26) and Small (1997: 82-6) reconstruct the legendary tale of the invention as transmitted by two Roman authors,[105] by whom this invention is warmly greeted: "gratiam habeo Simonidi illi Ceo quem primum ferunt artem memoriae protulisse" (Cicero, *De Orat.* II, 86, 351). The occasion is a dinner held by Scopas, the winner of a boxing competition, who commissioned Simonides to compose an *epinikion* in his honour, to celebrate the event; but in the client's opinion the poet lingered too much over a digression on Castor and Pollux. Thus, Scopas, showing his shabbiness, told Simonides to ask half of the agreed sum to the sons of Leda. During the banquet, though, the poet was told that two young people were asking for him and as soon as he went out of the hall to meet them, the roof collapsed, killing Scopas and all the other participants. Since the two persons suddenly disappeared everyone thought that the Dioskouroi saved Simonides and punished Scopas for his ungratefulness. Ironically Simonides was called to identify the disfigured crushed corpses and this is the most important part of the narration: for the poet resorted to a rudimentary mnemonic technique. He was able to recall each of the participants from the place they occupied in the hall. Therefore, Cicero concludes, the best training for memory consists in memorizing the order of the places (*locorum ordo*) instead of the order of the things, preserving likenesses (*effigies*) in place of the things themselves. When one needs to recollect the items, he will substitute the wax of the tablet, in which he has drawn the disposition, with the item to recollect he bears in his soul and the letter with the image it stands for (*ut locis pro cera, simulacris pro litteris uteremur*). Indeed Aristotle, at 452a19-26, used a very similar terminology, leading the scholars to interpret the wax model and the letters used in that example as a clear hint for ascribing to Aristotle the mention of a mnemonic technique in the mould of this one to the philosopher.

I shall return to this passage later.[106] But what I have been interested in highlighting here is the evolution of a sensibility towards memory in ancient Greece. Techniques of memorization have been used since the dawn of literature, but they were limited to this practice and protected by gods for their role in the transmission of a centuries-old legacy. The evocation through images allowed by the Muse is the greatest gift for the poet and the Pindaric 'poetic of light' testifies to it at its best: the song defends the past from the darkening process of oblivion and guarantees the glorious present is remembered by posterity. Finally Simonides contributed to definitively dispelling this aura also explicitly pointing out the strong kinship between poetry and figurative arts, a bond rejected in the early ages with the exclusion of those *technai* from

[105] Cicero in the *De Oratore* II, 86, 351-4; Quintilian in the *Insitutio Oratoria* IX, 2, but cf. also Long. Rhet. 1, 2, 201.
[106] Cf. below, pp. 106-11.

the number of arts protected by Mnemosyne and her daughters. Plutarch quotes three times[107] Simonides' belief that "poetry is vocal painting (ζωγραφίαν λαλοῦσαν), painting is silent poetry", that Horace condensed in the famous motto *ut pictura poiesis*. Thus it is revealing that whereas the increasing technicality of poetry and secularization of its methods attracted the censure of Simonides' contemporaries, Roman theorists of oratory hailed him as the initiator of a study crucial for Latin society, since the orator does not work anymore in contexts of cultural transmission, but rather in the judicial and political field, in which the organization and the sophistication of the arguments are a requirement for the success of a position. However, this level of social complexity was yet to come in the early fifth-century Greece pending the appearance and strengthening of sophistic teachings.

2.2 Other traditions: *Lethe* and metempsychosis

Indeed, what I have sketched above can be considered the main background of the pre-classical age, but some processes, both historical and philosophical, which took place in the early fourth century should be traced back to different traditions. Written records, which had been used only as a mnemonic device for 'intellectuals' (Thomas [1989: 20-1 and n. 22]) or as a temporary receptacle of information, useful only thanks to the public readings that were given of them (54; 62-3), in less than a century became the chief medium of transmission. For instance Thucydides, in a passage very important for our inquiry, reports Pericles' funeral speech in memory of the Athenians fallen in the first year of the Peloponnesian War:

> ἀνδρῶν γὰρ ἐπιφανῶν πᾶσα γῆ τάφος, καὶ οὐ στηλῶν μόνον ἐν τῇ οἰκείᾳ σημαίνει ἐπιγραφή, ἀλλὰ καὶ ἐν τῇ μὴ προσηκούσῃ ἄγραφος μνήμη παρ᾽ ἑκάστῳ τῆς γνώμης μᾶλλον ἢ τοῦ ἔργου ἐνδιαιτᾶται (*Hist.* II, 43, 3).[108]

The inscription of a memorial stone is not sufficient to reach remote countries, but an unwritten memory (ἄγραφος μνήμη) retained in the heart would do it better than any other record. Similar expressions can be found in Oenopides and in Antisthenes, who blamed the excessive use of books and notes, because knowledge should be inscribed in our souls (respectively στῆθος and ψυχὴ) (Thomas [1989: 33]). Therefore knowledge was not conceived as completely liable to external espression and codification deep in the fifth century.

[107] *Glor. Ath.* 3 (346 f); *Aud. poet.* 17 f-18; *Quaest. conviv.* IX, I5.
[108] "For heroes have the whole earth for their tomb; and in lands far from their own, where the column with its epitaph declares it, there is enshrined in every breast a record unwritten with no tablet to preserve it, except that of the heart" (Crawley).

Indeed the very concept of γνώμη shows that the sources of Aristotle's views on memory were rooted in this context. This term primarily stands for a mark or a token and afterwards it was extended to denote the organ through which one perceives or knows and finally the abstract capacity of thought and judgement (LSJ [1996: 399]). Thus, the model of memory as inscription and the primacy of 'internal' over written memory are far from being a brand-new Platonic acquisition. However, coming back to the evolution of written records, only a century later we find an author like Aeschines who exalted the capacity of writing to retain information:

> καλὸν ἡ τῶν δημοσίων γραμμάτων φυλακή· ἀκίνητον γάρ ἐστι (*In Ctes.*, III, 75, 4-5).[109]

This *akinesia*, somehow akin to the modern conception of archive, was under discussion during the troubled years of Plato's youth. The political instability that distinguished the post-Periclean Athens was the scene of an oscillation between recording history in permanent supports and organized oblivion. Pinotti's (2006) vivid reconstruction reaches the heart of the matter: in Athens the succession of events of the last quarter of the fifth century hinged upon the articulation of some unresolved "blind spots of memory". On the one hand, we assist a clear process of stabilization and organization of collective memories and proof of this emerging sensibility is the institution of a city archive, the *Mētrōon*, in which official and political documents began to be gathered since 410-405 B.C., when the *bouleuterion* moved to a new building (Thomas [1989: 38-40]). But the case of Athens was not isolated, since magistrates known as *mnēmones* were in charge of the preservation of private contracts – orally and later in written records – in many *poleis* (Sakellariou [1990: 26]).

On the other hand, still, alongside this effort to preserve the past in reliable records, the necessity of a selection became more and more urgent for two reasons. Firstly, as Small (1997: 83) highlights very well, "there were simply too many words to cope with without some kind of improved retrieval system"; this concerned poetic production, since the strategies of versification radically changed from the rather fixed use of stereotyped phrases of the epic poems to a more varied kind of composition, in which the exact reproduction of the text was extremely important. But a second, and more relevant reason, required the application of a method of memory organization. In political disputes an 'excess of memorization' can prove to be self-defeating as it is a potentially destabilizing element and indeed the political events Athens went through after Pericles' death demonstrate this threat. On this point it is interesting

[109] "The preservation of the public documents is a fine thing since they remain unaltered" (Thomas [1989: 70]).

to note that the restoration of democracy in 403 B.C. is followed by the erection of an altar in honour of Lethe and the slightly earlier institution of *Mētrōon* falls within the same strategy of centralization of the 'official memory'. In addition, the seal of the new social unity was an oath "not to recall the misfortunes of the past" and a broad amnesty. This ban of μνησικακεῖν also occurs *Lett.* VII, 336e-7a, probably Plato's work, and Aristotle (*Ath. Pol.* 39, 6), because memory can be exploited to foment hatred within the city.

However. this idea has many antecedents in Greek culture, as Loraux (2002) points out. The tradition ascribes to the Muse not only the power to preserve the past, but she also "opens the way to a good *anamnesis*" (169). Her reconstruction is remarkable in this sense and helps us to recognize the true importance of the Hesiodic epithet (*Theog.* 55), according to which the Muse is called λησμοσύνην τε κακῶν ("forgetting of ills").[110] Far from being the attribution of a hedonistic trait of *divertissement* to arts, the intervention of the divinity becomes necessary when conflict penetrates the community. Loraux quotes several relevant passages to demonstrate this. First of all, the proem of the *Iliad* begins exactly with the poet's invocation to the Muse to sing him the frightful wrath of Achilles against Agamemnon, a conflict that endangered the success of the expedition. Only when Achilles got over his anger could the reconciled army defeat the enemy. At the end of the *Odyssey* (XXIV, 482-5) there is a similar call to forgetting by Zeus and Athena and to swear an oath to forget the deaths after vengeance has been taken by Odysseus. Also in tragedies the articulation of (and the filter on) memory is central to the stability of the *polis*. The author mentions Sophocles' *Electra*, but I suggest the *Antigone* is even more relevant, because of the contrast between two kinds of forgetting. First Creon committed *hybris* not allowing a decorous burial for Polyneices. This is a clear act against the 'normalization' of memory, that is the reconciliation of the sides in recognizing the same history and accepting to live together again, the gods require after the conflict, but the attitudes of the two sisters of the son – and brother – of Oedipus are opposed: on the one hand, Ismene resigns herself to a condition of submission, on the other hand Antigone struggles to bring back with the corpse the remembrance of her brother within the city. Therefore, if in general the refusal to forget is dangerous to the city, a kind of forgetting is still guaranteed by the divinity, whose laws must be followed and in whose name alone a correct pacification can be undertaken. In this case time becomes a positive element, because it allows the reasons of the present to prevail over apparently unforgettable mourning. Thus, the

[110] Cf. also Vernant (2006: 121-2) and Simondon (1982: 128).

Muses, once again, help the community to elaborate its past through preservation, but also selection and oblivion.[111]

The passing of time is instead despised in another tradition. As Aristotle reports in *Phys.* Δ, 13, 222b17-8 the Pythagorean Paron is said to consider time as the most ignorant thing (ἀμαθέστατον) because it brings forgetfulness, whereas someone else stated that it was the wisest, and Aristotle concedes that Paron's opinion was more correct (λέγων ὀρθότερον), not a minor detail in our inquiry. This capacity of time for dulling human minds is a remarkable shift from the idea that what is ancient is more valuable and the traditional conception of passing time as healing that we have analysed thus far; Vernant (2006: 129-30) rightly points out the new stress on the individual this change entails. The "flux of becoming" does not smooth contrasts any more but corrodes the acquired knowledge of human beings. In addition, this is true in a cultural environment in which the knowledge lost extends for more than a lifetime and complete oblivion of those lives implies the incapacity of leaving the painful circle of reincarnations. For this reason it is necessary to look at the origin of this idea. A great deal of study has been devoted to the belief in transmigration of souls in ancient Greece in the last century, but the shortage of testimonies – mostly late and vitiated by non-neutral standpoints – affects the possibility of reaching definitive answers and this crux has been recognized by the subtlest interpreters.[112] However, for my present purposes, I will try to outline a framework as plain as possible without questioning the reconstructions we possess, which collected important evidence scattered in Greek literature about those 'unofficial' practices which were kept secret since the antiquity.

Dodds (1951: 135-78) was the first scholar to connect the Orphic-Pythagorean theme of metempsychosis with shamanic figures active in Greece. The belief in survival, reward and punishment after death has been a standard feature since Neolithic times (136-7), but the shaman interprets primitive elements of superstition and condenses them in his persona. Healer, prophet, 'scientist' and philosopher, the shaman is a holy figure who is able to control events thanks to his supernatural powers; therefore, he symbolizes a superhuman wisdom, whose authority is grounded in his own past experience. For instance, Epimenides, a semi-mythical figure supposed to have lived in the sixth century, is the first – known – person to combine

[111] Divinity permeates Greek society to a deep level: for instance, still remaining in the field of mythology, the element which can undermine social cohesiveness is recognized as a primeval divinity just like Mnemosyne. The Erinyes symbolize that refusal to forget – the whole *Oresteia* turns on this problem. Thus, once again, the result of this dialectic between memory and forgetfulness should not be forced towards a straightforward justification of the social order, but always as the fruit of mediation between two pressures, the centrifugal force of revenge and the centripetal one of common interests: the balance that follows – like Pindar's *charis* – is always uncertain and renegotiable.

[112] E.g. Burkert (1972: 133-5) and Philip (1966: 152-3) raise a series of doubts hardly surmountable.

alleged experiences of ecstasy and reincarnation in Greece (Simondon [1982: 152]). He himself claimed to have lived many lives and to be the reincarnation of Aeacus and Aristotle mentions him as a seer (*Rhet.* Γ, 17, 1418a24-6).[113] Epimenides was not an isolated case: the journey of the soul, like the one into the underworld, is a recurrent theme in Greece. The example of Hermotimus of Clazomenae demonstrates how these figures were respected and honoured in the *polis* (Burkert [1972: 152-3]). Therefore, shamanic activities share a high level of individualism and are focused on the charismatic individual. But even entire cults could be established on those ecstatic experiences. Once again Burkert ([1972: 154]) gathers the different testimonies on the oracle of Trophonius in Lebadaea. "Before the sanctuary were the springs of Lethe and Mnemosyne" and there the initiates underwent a *katabasis* that could last for days. The believer must drink the water of the first spring to forget all his ordinary thoughts, which hinder him in this extraordinary experience, and only afterwards can he drink the waters of Mnemosyne that propitiate the connections with the underworld.

However, this conception of soul is rather new. Dodds (1951: 138) reminds us that often in Greece the *psychē* was conceived as a "mental correlate" of the *sōma* not detachable from it, but the ordinary language admitted wide fluctuations even in the fifth century. These cults required a radical reassessment of the belief in a soul detachable from the body. The existence of a demonic self permeated Greek culture and extended its influence from chosen individuals like the shamans to a more general theory on the nature of the soul. A testimony of this framework has been found in two important texts by Pindar, *Olympian* II, 56ff. and fragment 131 S. In the latter, to which Dodds (1951: 135; 156-7 n. 1) rightly ascribes a prominent position in his reconstruction, the poet declares that while the body is subject to death, there is an image of life that survives, because of its divine nature (ζωὸν δ᾽ ἔτι λείπεται αἰῶνος εἴδωλον· τὸ γάρ ἐστι μόνον ἐκ θεῶν). A further confirmation that it is detachable from soul is that precisely when the body ceases its activity, this *eidōlon* reveals itself in prophetic dreams.[114] *Olympian* II, 56ff. is less important for us, even if it was object of debate on the nature of punishments the body must endure after death.[115] However it is worth noting that it is addressed to Theron, an athlete of Akragas, the native city of Empedocles, an element that may strengthen the conviction that the belief in this kind of soul was already rooted in Magna Graecia.

[113] Aristotle here refers that Epimenides was able not only to forecast the future, but also to describe the unknown past (ἀλλὰ περὶ τῶν γεγονότων μὲν ἀδήλων δέ: "only about the obscurities of the past" [Rhys Roberts]) and Dodds (1951: 143) tends to identify this past with the previous lives Epimenides' soul lived.
[114] On this fragment cf. also Simondon (1982: 154).
[115] Cf. von Fritz (1957), Bluck (1958), Skutsch (1959), McGibbon (1964).

As Simondon (1982: 157) argues, the extension of a doctrine of metempsychosis to all mortal souls required a moralization of it, because whereas such ecstatic experiences may be explained in shamans in virtue of their exceptional nature and harmonized within traditional beliefs, the same prodigies require an underlying theory of soul and a coherent eschatology, when everyone can potentially experience them in dreams or under different conditions. This evolution from an individual exception to a collective cult was accomplished, before Pindar, by the so-called 'Orphic-Pythagorean' tradition. Once again, we find another tangled skein, whose main thread seems to be lost or irreversibly compromised. Actually, Orphism and Pythagoreanism in Greece are very hard to reconstruct faithfully, because the sources are often late or from Neopythagoreans, corrupted, openly or implicitly ironic and sceptical, legendary. In addition, Orphic and Pythagorean members were bound to keep the secret of their rituals, and finally the two movements are often confused and superimposed.

However, a few solid points seem to have been established. There is no direct mention of a doctrine of metempsychosis in the Orphics, but it is certain that they claimed that the human soul is detachable from the body. For it exists prior to the body in which it is temporarily imprisoned, and this exile is the consequence of a punishment the soul can undergo in a judgement to which it is subjected after death.[116] The punishment is decided on the basis of the way one behaved in the former life: this fact contributed to the development of the 'puritanism' Dodds (1951: 149 ff.) described in his work. From the organization of probably archaic vetoes and taboos derived an organic doctrine of purification to mend this life's sins or those of former lives.

This element has particular relevance in Pythagoreanism: Pythagoras himself was considered an incarnation of Hyperborean Apollo, with a clear reference to purification cults (Philip [1966: 156]). Metempsychosis is a more central issue in Pythagoreanism and attracted criticism in antiquity. Indeed, some of the miracles and prophecies attributed to Pythagoras, which Burkert (1972: 141-4) enumerates are used by later authors to ridicule and discredit him, but from them we can reconstruct a trustworthy portrait. One of those testimonies is very interesting for our inquiry. Hermippus' account of Pythagoras' *katabasis* reported by Diogenes Laertius (*Vit. Phil.* 8, 41)[117] relates how Pythagoras gained his fame after his arrival in Italy. He built an underground room and instructed his mother to take note on a tablet of events and the time in which they will happen (τὰ γινόμενα εἰς δέλτον γράφειν σημειουμένην καὶ τὸν χρόνον) after his descent into the room. When he eventually came back, he claimed to

[116] Cf. Burkert (1972: 126) and Simondon (1982: 165-6).
[117] This passage is translated and commented on by Burkert (1972: 156).

have visited Hades and returned, and read his mother's notes to the assembly, who considered him a divinity. Even if "the mocking tone of this account [...] is of course unmistakable" (Burkert [1972: 156]), still it accounts for and introduces a new element: the importance of a precise memory connected with ecstatic experiences. It is almost certain that Pythagoras believed in metempsychosis[118] and that a soul could clothe itself with both human and animal bodies, since at DK 21B7 Xenophanes – again taunting him – refers to the fact that Pythagoras blamed a man for clubbing a dog, because he recognized in its barks the voice of a dead friend.[119] Two other important passages on this doctrine are supplied by Aristotle's *De Anima* (A, 3, 407b12-26 and B, 2, 414a24-5).[120] Aristotle too believes that animals have a soul, but it is impossible that theirs can share the same capacities as a human soul, or be incarnated in a human body, because every soul 'fits' its own species' kind of body and they who believe in metempsychosis fail to justify a similar conjunction.

We can now return to the conception of time Aristotle appreciated in Paron. In order to save some information from the flux of time the Pythagorean practice included a mnemonic training, preliminary to the remembrance of previous lives. It consisted in constant exercises (μελέται) to remember every act the initiate performed during the day. Iamblichus (*Vit. Pyth.* 164 ff.) describes one of those techniques:[121] on waking up the Pythagorean tries to recollect all events of the day before, but not randomly. He should recall the first one, then the second, the third and so forth. In the end, he will be able to give an order to every event and reconstruct the whole day. Through this *askesis* he constantly examines the relation between his soul and his body and has the awareness of the events of his life; for the Pythagoreans this awareness is propedaeutic for recollecting the events of previous lives he had lived. Consequently the Pythagorean is somehow subject to an 'obligation to remember' that induces him to cultivate his mnemonic capacities to achieve that recollection: the constant exercise leads the initiate towards the synchronization of the individual and the cosmos, the time of one's life and that of history (Vernant [2006: 132-3]), that had been an unsolved problem since the 'collective memory tradition' I sketched above was abandoned, or at least whose importance was drastically reduced.

The last philosopher I will examine before Plato is Empedocles. He condenses Pythagorean doctrines with a pronounced tendency to shamanistic attitudes and he acts as the ideal link between these traditions and a new 'rationalistic' generation of philosophers, even if he surely

[118] Cf. DK 14A8.
[119] On this passage cf. Dodds (1951: 143-4) and Burkert (1972: 120-1).
[120] Cf. Philip (1966: 151-2) and Burkert (1972: 120-2).
[121] Cf. Simondon (1982: 158-9).

remains an original thinker. I will try to show this through a brief review of the most significant extant fragments. As Trépanier (2004: 116-29) demonstrates, the Orphic-Pythagorean tradition had a great influence on Empedocles' thought and many commentators interpret fragment 129 as a direct tribute to Pythagoras' wisdom, who gathered his immense knowledge "in ten and even twenty generations".[122] From him Empedocles inherited the same attention to *askesis* and method. For instance, in fr. 24[123] Wright (1981: 185) sees "the suggestion that E[mpedocles].'s method is to give the main points of his argument [...] and then to develop in further (but not exhaustive) detail the sections of especial relevance or interest". This might be read as a kind of technique of memorization that consists in the isolation of the main points of an argument from which we can easily regain the whole structure, in order to allow more freedom in exposing the doctrine. This model bears some similarities with the 'technique of mid-points' described by Aristotle at 452a19-26.[124]. But those suggestions are connected to an underlying theory of knowledge as fr. 110 shows. Here the "throbbing, crowded thoughts in the thorax under which they are to be pushed [...] and then contemplated" (Wright [1981: 258]) must be firmly retained as a quasi-physical representation before the initiate's mind[125] with constant effort (μελέτῃσιν) that will establish a habit (ἦθος). Moreover the appearance of thoughts is caused for Empedocles by the flow of blood around the heart (fr. 105). The dynamism implied in this account of psychic capacities will find an echo in Aristotle.

However, the training needed to reach Empedocles' level is not easy to acquire and makes these teachings hard to learn for common people (fr. 114). Indeed Empedocles presents himself as a revered prophet and healer, who possesses divine powers (fr. 112) and guarantees his disciples that they can gain similar gifts thanks to his teachings, including the power of resurrecting dead men from Hades (fr. 110). So Empedocles believed in metempsychosis and he himself mentions which transmigrations his *daimon* has undergone before joining its present body (fr. 117);[126] since he too admits transmigration in animal bodies, he firmly prescribes vegetarianism in two evocative fragments (139 and 141). However, the *daimon*'s exile (Simondon [1982: 162]) is included in a cosmological framework, in which the terminology of

[122] From now on I will use Wright's translation (1981), but keeping Diels' numeration of the fragments. On the basis of Iamblichus and Porphyry, Dodds (1951: 143-4), Burkert (1972: 137-8) and Wright (1981: 256-7) tend to believe that the anonymous wise man quoted is Pythagoras, despite Diogenes Laertius' suggestion that the person Empedocles is referring to here could be Parmenides.

[123] κορυφὰς ἑτέρας ἑτέρῃσι προσάπτων μύθων μὴ τελέειν ἀτραπὸν μίαν ("Joining one chief point to another, so as not to pursue only one path of discourse"). Cf. also fr. 35, 1-2.

[124] Cf. below, pp. 106-11.

[125] Cf. Wright (1981: 258-9).

[126] Arguably the kind of memory of Empedocles' *daimon* is not merely personal in modern sense, but it testifies to his ascension to the top of the ladder of beings as a wise man; however, once a man has reached such heights, he nevertheless has more than 'philosophical' awareness of his position in the world and this makes him speak *as if* it was personal memory.

individual experiences and the metaphors borrowed by collective practices are merged. Fragment 115 is exemplary in this sense. Here the decree of necessity that forces the sinful soul to reincarnate is eternal and "sealed by broad oaths" (πλατέεσσι κατεσφρηγισμένον ὅρκοις), the same oaths that seals the succession of Love and Strife in ruling the world (fr. 30). Thus, the souls purified are able to understand this harmony between the individual and the cosmos[127] and reach a divine level of existence. In conclusion, it is worth mentioning the invocation to the Muse,[128] in fragment 3: she guarantees some techniques of memorization, but while in the epic poem they were directed to preserve the contents of a collective past to new generations, here they are the instruments of the bold ambition of the shamans to eternalize themselves and the initiates individually.

2.3 Plato's synthesis

Oral cultural transmission and cults and beliefs like Orphism and Pythagoreanism were significantly opposed each other, but they coexisted in Greek society without explicit contrasts because some beliefs, like metempsychosis, always had an aura of mystery for common people, that prevents those ideas from circulating in large sections of the population in highly structured forms; however, they always remained available to a limited number of people initiated into some secret rituals. Thus, it is very interesting to consider how Plato dealt with these two traditions and used one to demolish the other. The complexity of his reflection could not be reduced to sheer support for a pre-established model, but the idea of metempsychosis will be included by Plato in a peculiar theoretical framework.

– **Plato as a critic of his contemporary society**

Plato was a fierce opponent of the traditional ways of cultural transmission and in particular of the manipulation they underwent in his age, which caused huge corruption in public life according to his view. The first target of his criticism was the class of poets and rhapsodes, that played a key role in transmitting many educative messages through the poems. Platonic rejection took two different forms, but both share the exclusion of poetry (as it was in his age) from any acceptable pedagogic process.

[127] In fragment 146 he gives some examples of public figures that can aspire to acquire a divine status: "prophets, minstrels, physicians and leaders". Each kind seems to me to correspond to the Empedoclean ideal of knownledge of this harmony, only in different respects.
[128] Cf. Trépanier (2004: 52-65).

First of all, he thought that the poet during the composition and the rhapsode in the performance are under direct divine influence that accords them artistic mastery[129] and their peculiar attractive power is beautifully described in the metaphor of the magnet at *Ion* 533d-536d: inspiration is set in motion by the Muse, then it passes through the poet and the rhapsode to reach the audience as the last link of this chain. However, for this reason, even if they claim to be wise or skilled in many areas, Plato argues that poets and singers do not have any true knowledge by themselves, but they only offer the appearance of a *polymathia* like Proteus who changes his form into everything he wants (cf. *Ion* 536e; 541e-542a), thus any attempt to demonstrate this wisdom will be easily refuted by Socrates in the *Ion*. Besides Plato criticizes the poets because they, like the sophists, are bound to please an audience that grant them material comfort with rhetorical subtleties (*Ion* 535e; *Tht.* 173b), while there is no need to embellish the truth as it can be reached with plain language by an ordinary man (*Ion* 532d-e). Correct pedagogic processes, therefore, should not rely on poetry, since poetic inspiration is not primarily directed to education, but it is only a gift from the Muses and is not under their power. This idea can be traced to *Ap.* 22a-c, in which a supposedly less 'platonized' Socrates expresses the same judgement.

Moreover, attributing divine traits to poetic practices meant the exclusion of that art from the compass of *logos*, and Plato took more radical positions about poetry in other works. Firstly, the poets are completely embedded in the social dynamics of transmission; with the sterile imitation of those schemes no one will be able to reach a critical position towards the *status quo* (*Ti.* 19d-e). But in particular in the *Republic* (II 376c-383c; III 386a-398b) traditional poetry is not only neutral, but even harmful for a good education.[130] Honoured poets like Homer and Hesiod wrongly depicted gods and heroes as engaged in unjust behaviour or at least as immersed in the kind of passions which every human being should avoid for themselves. This is not only morally unacceptable, since gods should not be capable of evils, but it also causes an educative deformation of the younger generation. Thus the *mythoi* the poets transmitted shape young souls[131] and prepare them to imitate wrong models;[132] to these

[129] For instance, this influx is included among the species of divine madnesses at *Phdr.* 245a-c; cf. also *Meno* 99c-d. Actually, to attribute divine features to human activities – when Plato wanted to demystify their pretence of knowledge – is a standard strategy. Concerning the use of the word θεῖος at *Symp.* 209b2, Rowe (1998: *ad loc.*) points out that at *Meno* 99c-d "the same word *theios* is applied to all sorts of people, including poets and politicians, who (seem to) manage to get things right without knowing what they are doing". And actually, in particular in the *Ion*, it is hard to distinguish whether Plato is mocking the singer or he is somehow serious in that respect.

[130] Havelock's (1963, in particular pp. 3-35) analysis remains a milestone for the perspective I hold here.

[131] It is worth noting that Plato often uses the metaphor of moulding (the verb πλάττειν occurs with the same meaning also in *Ti.* 88c and *Resp.* 500d – in both of these passages it is connected with the idea of exercise, μελέτη – but also at *Resp.* 374a, 420c etc.). In particular, at *Resp.* II, 377b the philosopher says of a young man's soul that "it is best moulded and takes the impression that one wishes to stamp upon it" (from now on the

deceptive models Plato wants to substitute a rationalized edifying poetry and yet limited as much as possible. In the third book Plato's criticism gradually shifts into a general condemnation of the mimetic character of poetry and he argues that in the ideal *polis* the *mythoi* should be chosen carefully to instil virtue and not looseness in hearts. But at the beginning of *Resp.* X (595a-608a) Plato will come back to this topic and will confirm the condemnation on an ontological level. Poetry – but also every art that reproduces objects of the physical world – steps back from the truth a degree further compared to our experience, because it imitates what is already an imitation of the true model: the result is a mere phantasm. As painting does with colours, poetry represents with words those appearances beyond which we should go: both kinds of artists create for themselves and their 'public' an hermeneutic circle in which the physical object or event reproduced and its copy constantly refer to each other without any possible insight into the nature of things. Thus indulging in this circle is a form of corruption since the observer/listener remains shut in a world of appearances that appeal to his desiderative part, instead of leading him toward the essences, like philosophy does. The resort to arts which Plato allowed in a reformed way in the previous discussion is here reduced still further.

These charges are partly based on the central role of poets and rhapsodes in transmitting cultural models, a role that began to be questioned around Plato's time. At this time the traditional *paideia* proved to be insufficient in a society in which specialization became more and more important and the repetition of that static repertoire would not satisfy the requirements of a new society; at the same time the gradual adoption of written records substituted and confined poetic performances to a sheer display of mnemonic virtuosity,[133] that was the consequence of rote memorization and not of true knowledge. In this sense, any development of mnemonic techniques is useless, because it is indeed true that the artifices the poets use can impress their audience and help them to remember their own composition, but they do not help the listeners to approach the truth in any way, or at least they are not primarily concerned with that result. Coming back to the *Ion*, at 530c Plato significantly argues that a good rhapsode should better try to penetrate the poet's *dianoia* and interpret it for us rather than mechanically "learn by heart" (ἐκμανθάνειν) his words. It is interesting to note that this could be, at least partly, an 'authentic' Socratic conception, since some hints of it can be found in

translation used will be Shorey [1930-5]) (μάλιστα γὰρ δὴ τότε πλάττεται, καὶ ἐνδύεται τύπος ὃν ἄν τις βούληται ἐνσημήνασθαι ἑκάστῳ). The echo of this terminology will be clear at *Tht.* 191d and will be part of Aristotle's theoretical toolkit.

[132] This conception can be seen as operating in *Euthphr.* 5e-6a, where Euthyphro adduces Zeus' uprising against Kronos as a justification for suing his father.

[133] Cf. above, pp. 42-50.

Xenophon (*Mem.* IV 2, 10; *Symp.* III 5-6), in which the rhapsodes are depicted as a vacuous breed.

On the one hand, the disapproval of rote memorization is the link that allowed Plato to extend the criticism to the sophists.[134] For the process we can see operating in the sophistical movement is the externalization – some would say 'reification' – of culture: for instance Gorgias, at DK 82B11a.194-5 considers written laws as custodians of justice and letters as "instrument of memory" (μνήμης ὄργανον). Many sophists, furthermore, elaborated mnemonic techniques and required passive memorization from their students. As can be seen in the *Dissoi Logoi*,[135] memory is regarded as the most important *invention* (ἐξεύρημα) – not as a faculty or a capacity – and some basic principles for the improvement of memorizing capacities are offered. But, in particular, Plato gives some sarcastic testimonies about Hippias' renowned *mnēmonikon* at *Hp. Mai.* 285e-286a and *Hp. Mi.* 368d-e.[136] In the latter passage, along with a humorous playing on Socrates' pretence of forgetting Hippias' merits, this technique is hinted as the sophist's most important achievement, but in the former, more detailed information can be found, since Hippias states that he is able to memorize fifty names at a time and repeat them in the exact order. However, Plato's irony is not ultimately directed against the technique in itself, but only against the worthless use to which the sophists apply it; for it is used for pleasing the masses with tales of genealogies, foundations of cities and so forth: therefore Hippias is "forced to learn by heart" (ἠνάγκασμαι ἐκμεμαθηκέναι) those stories. Besides the passivity of this, the problem Plato raises here is the intrinsic wothlessness of what is duly memorized, while the true philosopher should especially teach the truth and direct the citizens towards the best political goals, instead of being guided by the people. That Plato dreads the dangers of a political ability enslaved to the masses is explicit at *Grg.* 517b-c; furthermore, sophists and rhetoricians are always constrained within the rules of the *polis*, whatever they are. For instance, Plato often notes that the time in which they must complete their pleas is always limited, while the true philosopher takes all the time he needs to exhaust an argument (*Tht.* 172c; 201b; *Grg.* 485b-c).

On the other hand, with their ability the sophists can deceive the masses in a new way and make them think that they are able to answer any question the audience would like to ask them. Plato was not impressed by this capacity. At *Gorgias* 447c and 462a Socrates displays

[134] For introduction to the sophistic movement and their philosophical positions see at least Guthrie (1971) and Kerferd (1981).
[135] DK 90B9. This work is usually thought to have been composed between the end of the fifth and the beginning of the fourth century, but the reader must be aware of Conley's (1985) position, which inclines to consider it a later school exercise. It remains clear however that the work should be included in the sophistic cultural climate, if only as imitation or parody of it.
[136] Other testimonies about Hippias' *mnēmonikon* are DK 86A2 and DK 86A5a.

contempt towards this activity of deception,[137] and the pretence of *polymathia* is generally satirized in his works.[138] Still the sophists' teaching had an immediate utility, because the appearance of knowledge and the ability to persuade the interlocutors were mainly elaborated for agonistic contexts like judicial and political debates. So, they offered this *technē* for a fee that was arranged on the basis of the 'amount of knowledge' the pupil wanted to learn. Again, this falls within a process of reification of knowledge,[139] which was offered as a mere means to reach some end, without any interest in the students' *eudaimonia*.[140] One of the best standpoints from which we could epitomize those charges and which will allow us to introduce a very important point in our later discussion is the *Sophist*, a dialogue in which a stranger from Elea, a disciple of Parmenides, and the promising boy Theaetetus discuss the definition of a sophist. The first one, established after a paradigmatic display of the diairetic method, states that "the sophist showed himself to us in the arts of hunting [of promising youths], contests, commerce [of notions], and the like, which were subdivisions of acquisitive arts" (265a; transl. by Fowler).

This last definition, namely that their art is acquisitive, but also concerned with likenesses, is the one that persuades the citizens of their utility for the *polis*, but the stranger will demonstrate with new divisions that the art they profess is fictitious, because the sophists imitate but do not know the object, but only the likeness they reproduce. Although in many senses they were the continuators of a settled pedagogic method, the sophists adapted it to an evolved scenario. Plato's attack is not of course dogmatic or uncritical like many of the charges his conservative fellow citizens moved against the sophists and indeed he satirizes at *Meno* 90e-92e Anytus' spite, which is not based on real understanding and could lead to the wrong targets – like Socrates himself. But in the *Sophist* Plato shows how difficult it is to understand who they really are and how complicated their banishment from the *polis* will be, confused as they usually are with philosophers. If in the case of poetry it is clear that the message that

[137] As DK 82A1a demonstrates, it was a 'historical' trait of Gorgias' thought, which is recalled again at *Meno* 70b-c.

[138] For instance, the word πάσσοφος is often used ironically, both for the sophists (*Euthphr.* 271c-272a; 287c; *Lysis* 216a; *Tht.* 152c; *Prt.* 315e; *Soph.* 251c) and the poets (*Tht.* 194e; *Resp.* X, 598c-d).

[139] In some sense Plato too had engaged in this 'reification', but the important difference is that what has been reified are the *objects* of knowledge and not the scattered pieces of knowledge offered by the sophists.

[140] Cf. *Grg.* 449d-453a, in which Gorgias argues that rhetorical skills are different from every specific art, but they can be used in each of them and the most important thing is to persuade the audience or the Assembly, without even mentioning any concern for the truth. It is clear that the sophist conceives his art as morally neutral: it is perfectly suited for a 'democratic' political situation, in which it is fundamental to be able to make certain opinions (or interests) prevail. And actually, later, at 481c-482c Socrates will directly hint at this love for Demus, playing with the homonymy between a beautiful Athenian boy and the people of the city, whom Callicles always has to indulge, while philosophy "always holds the same" (Lamb). Also at 511c-513d Socrates reproaches Callicles' reluctance to agree that the rhetorician does not save the citizens or pilot them to the good (like in the example of the ship of the State in the *Republic* VI) "because of his love for Demus".

traditional poets transmitted was suffering from a deep crisis because it was largely inadequate for the new kind of society, for the sophists the criticism had to be subtler.

The sophist, like the poet, used to resort to several rhetorical skills to achieve the audience's praises; but the use of them was slightly different. While for the poet rhetorical and mnemonic skills were required to transmit the historical heritage of the community, and nevertheless were subordinated to those contents, in the sophists the effectiveness of those techniques began to be studied systematically and autonomously, thus detached from their cohesive role in society. In the *Sophist*, their art consists in producing 'spoken images'[141] that, like painters' works, are constantly related to us and not to the object depicted.[142] In this sense the reality they produce is a θαύμα (233a; 235b), a magical replication that mirrors reality and gives the people the impression that the rhetor is versed in many arts, while he has a 'knowledge' that is "based upon mere opinion" (232a), because it derives from the substitution of the truth with the *eikos* (*Meno* 70c – cf. also DK 82a1a; *Phdr.* 272b-274b). The definition of image (εἴδωλον) at 239c-240c is the climax of this criticism, since it introduces an intermediate realm of objects, neither completely real nor unreal, to which the hydra-headed sophist forced the stranger of Elea and Theaetetus to admit. Cornford (1946: 212) rightly connects this kind of image with the φανταστικὴ τέχνη Plato attributes to the sophists at 236a-c. It is opposed to the likeness as accurate replica of the object, which is essentially related to its denotatum; the semblance, instead, *qua* false, loses even this tie with reality.

The poets' aim, as we can see, is radicalized: for the sophists try to pass off this fiction as reality. Consequently, Protagoras in the eponymous dialogue (338e ff.) has to commit 'parricide' against Simonides too, as the stranger of Elea had to do against Parmenides, in order to defend his relativism, that for Plato is nothing other than the philosophical outcome of these rhetorical approaches. The method of distinguishing in the poet what it is good from what is not consistent or is openly contradictory cannot be accepted by Socrates (347b-348b) since it means remaining idly entangled in the θαύμα instead of removing that veil. This reply silences Protagoras.

– **The grounds for a new conception**

[141] Also in the *Cratylus* (439b ff.) Plato stigmatizes the idea that knowledge may be gained through the names, which are images of the things. The basic point of this rejection is the futility of learning through an imitation, while direct consideration of the things themselves is sufficient to obtain knowledge. Cf. Gulley (1962: 67-70).
[142] Cf. *Soph.* 235e-236b: the sculptor or the painter who wants to represent a man in a large work has to distort the natural proportions in order to make them appropriate to people's perspective and so does the rhetor in his speeches.

Havelock (1963: 215-233) interestingly reflects on this new perspective that Plato first introduced in the history of Greek thought against poetry, but applicable against the sophists as well. What Havelock calls "the recognition of the known as object" is the result of the process of separation of the subject from collective history expressed by the poems, history that absorbs him: "[…] the poem's structure, rhythm, syntax, and plot, its very substance, have all been designed for a situation in which 'I' do not exist" (217). Once detached from the "tribal encyclopedia", the interpretation of the fragments of knowledge scattered throughout the poems – what Protagoras has tried to do in the *Protagoras* – becomes useless, since the framework has been definitively damaged. We can briefly analyse these two facets of the phenomenon. As to the subjective aspect, Plato clearly shows the crisis Socrates' irony provoked in his interlocutors. His attempt at demolishing the false convictions acquired through education was meant to reach firmer ground to continue the progress towards the truth. In this sense Meno's numbness (79e-80d) is the most celebrated example, but *Tht.* 177b is even more eloquent: the sophist is only a child without his *technē* and therefore his rhetorical skills do not grant any significant growth, either for himself or for his pupils.

The crisis of the old implicit and somehow negative idea of subjectivity corresponded to the need to reform epistemology too. The typical sophistic way of proceeding was to enumerate the particular cases in which the listener could come across the object (*Tht.* 146c-e; *Meno* 71e-72b; *Euthphr.* 5d-6e; *Soph.* 239d), a method that still reflects – although in a refined and more aware way – the paratactic conception of truth typical of poetic transmission. But enumeration, in particular in the sophists, of the ways in which the object appears to us conceals the threat of relativism, that disregards the real nature of the object: at *Crat.* 385e-386e the belief that things have an essential relationship with the appearances we experience of them is clearly rejected as false. To this method Plato opposed the Socratic constant and often incomplete search for the answer to the question *ti esti*, namely of a definition capable of grasping the essence of the object itself.

However, the elaboration of a new model of knowledge had to deal with two main issues. Firstly, Plato had to rethink the means of cultural transmission. The requirements of the new society, as we have already seen, imposed the adoption of written texts to preserve memory or to address speeches in formal contexts, like the Assembly or the law-court, and it was a prevailing practice among the sophists and the rhetoricians to write – and sell – pleas for defendants. Certainly Plato rejected this habit, but he provided a more penetrating criticism of the use of written records in the 'myth of Theuth' (*Phdr.* 274c-275b). Here Plato considers whether written teachings could be an alternative model to traditional oral ones. The Egyptian

setting of the myth itself contributes by giving a sacred halo to the warning about the externalization of memory.[143] It narrates Theuth's gift of writing to the Egyptians as an instrument to become μνημονικώτεροι and King Thamus' criticism of its effectiveness: the use of external aids – he says – causes forgetfulness due to a lack of exercise (ἀμελετησίᾳ) and, in this sense, the subject would not be able to find out the truth by himself, because he relies on books. Therefore written texts can only be used as ὑπομνήματα (275a; d; 276d; 278a), i.e. reminders of something already known by the reader and, perhaps, drawn up by himself too. Plato disavows this medium[144] because in his opinion every theory must be measured by interlocutors who should end up agreeing on some points of the discussion; writings, like the paintings, are static and therefore mute to a possible opponent: they are only weakened *eidōla* of a true *logos* (276a). The apparently lush growth of the garden of Adonis (276b-277a) cannot fail to remind us of the sophistic use of writing; in this example, Plato reduces the sophistic agonistic conception of knowledge into an amusement for the true philosopher. Consequently, the model Plato opposes to this one is the pursuit of truth through constructive *dialegesthai* (276e-277a) that takes time,[145] but, like the art of agriculture, produces permanent fruits.

Therefore, someone might believe that Plato theorized an alternative pedagogic method. This is, strictly speaking, only partially true, as the *Meno* shows very well. Plato again takes a severe stance against the sophists, the first who made teaching a profession; for Plato radically questions the very possibility of teaching. What we can find in the *Dissoi Logoi* about the teachability of virtue and knowledge is interesting from this perspective.[146] DK 90B8 is a brilliant specimen of the sophistic quantitative idea of knowledge, since "knowing everything" (πάντα ἐπίστασθαι) is reduced to the ability to answer "about anything" (περὶ πάντων). So the *polymathia* is even deepened in comparison with other sophistic testimonies, since those who know the "nature of all things" will be able to teach anything and simultaneously this idea helps to create an asymmetrical relationship with the students. Plato instead – following Socrates – refuses to conceive of education as pouring notions into the learner in order to appear wise to the community, but more as a personal maturation given by an intersubjective

[143] Cf. Yates (1966: 39).
[144] Of course, the question is much more complicated than that, since Plato used the 'written dialogue' form, that is somehow an oxymoron, as the medium to transmit his own reflections.
[145] Cf. above, p. 63, n. 150.
[146] It is not my aim to demonstrate who has been influenced by whom (cf. above, p. 62, n. 148), but it would be striking if the formulation of the third objection against teachability, i.e. that many wise men did not teach their art to their relatives, and *Meno* 93c-95a about the same topic were not connected. However, the explicit rejection of innatism naturally makes me think of a post-Platonic work, which takes into account Plato's model.

intercourse.[147] This is what is ultimately meant to be the maieutic art Socrates claims to have inherited from his mother (cf. *Tht.* 148e-151d; *Grg.* 457e-458a). The learner must constantly face the risk of *aporia* (*Meno* 80a) and the 'teacher' should only help him to recognize if his offspring – as we will see later, what he has recollected – is worth retaining or should be dispelled like a phantasm (εἴδωλον) (*Tht.* 151c-d). In this sense, Plato in the *Meno* has voluntarily left the issue of the teachability of virtue undecided to show how an appropriate method like the *dialegesthai* is not fixed and it is really open in its results, even leading to unexpected increases of knowledge.

Thus, the lack of a method is a major failure and the *Symposium* is a superb example of the inadequacy of volatile opinions in the *polis*. Every speech of the participants has some points of truth, but none of them has a theoretical background to justify what has been said, with the consequent risks of error.

What I meant to do in these pages is setting the landscape of the discussion about memory and memorization before Aristotle to highlight how Aristotle cannot be considered the inventor of mnemonic techniques and how his contribution to these practices is not so original as it could be imagined. Plato's reaction against the incautious use of mnemonic artifices, included writing, testifies the pervasiveness of memory as a central issue in the definition of Greek society. In fact Plato's reflection can be considered a reassessment of the traditional ways of cultural transmission and of their role in the society and he tried to reform those ways to reach a stable knowledge instead of the questionable results they achieved in his age.

– **Models of memory and recollection: continuities and differences**

Therefore, the starting point for a consideration of Plato's conception of memory and recollection must be the inadequacy of the observation of the physical world and of the instable opinions in the city as foundations of human knowledge. I believe the introduction of recollection is one of the answers Plato put forward to propose a new foundation in a way communicable to a larger audience. In fact, he renewed the interest, in particular in the *Phaedo*,[148] in the Orphic-Pythagorean tradition so as to justify the detachable and immortal nature of the soul and attack the ordinary, often incongruous conceptions of the afterlife,[149]

[147] Scott (2006: 13) very helpfully points out how Socratic teaching was the reversal of Gorgias' way, "where the learner asks one short question, and the teacher replies with a speech", while Socrates constantly asks the learner.
[148] In this dialogue Socrates directly mentions Orphic doctrines (62b; 63c; 67c; 69c-e; 70c-d; 107d) as an authority that corroborates what he is arguing.
[149] For a reconstruction of the beliefs in transmigration before Plato see Bluck (1964: 61-75).

even though we must remember that at *Phd.* 114d the philosopher subordinates his commitment to those beliefs to the truths they convey.[150]

The theory of recollection presented in the *Meno*, in the *Phaedo* and in the *Phaedrus* and some analogous ideas of which can be found in the *Republic*, in the *Symposium* and in other dialogues[151] is the kernel of many Platonic reflections. If an origin can be recognized, it is to be attributed to the attempt to solve the so-called 'Meno's paradox' (*Meno*, 80d-e).[152] The paradox the young man proposes is prompted by the failure in his inquiry about *arētē* and, then, it is a consequence of the Socratic elenctic method. The paradox is quite serious, since Plato's withdrawal from the physical world poses the problem of justification of inquiry, whereas sense-experience cannot be invoked as the source and ultimate confirmation of our knowledge. Foreknowledge combined with recollection in this sense is a way through which Plato can conceive the passage from (true) beliefs to knowledge without any sensible confirmation and furthermore it allows Plato to admit the coexistence in the subject of knowledge and ignorance, since the knowledge the soul eternally possesses is lost in the very moment of his (re-)birth as incarnated living being: hence our permanent condition is one of latent knowledge which we can rediscover through inquiry. As we have already seen, in the *Sophist* Plato will deal with a similar difficulty concerning the twofold status of the image, that both is and is not, depending on our level of description: if we consider it as an object in itself, it certainly exists, but as to its representative content it is not.

As in the case of the myth of Theuth, the Egyptian origin represents an authoritative source of the story on which Plato could rely. However, this must not be confused with a sheer assent to that authority: actually, what seems to happen is quite the opposite, because Plato always uses alternative traditions, to a large extent mysterious and never fixed in a static corpus of beliefs, in order to keep a high level of possible manipulation. Of course he embraced too many 'unnecessary' elements of Orphism to say that Plato's mentions of its doctrines are only cosmetic, and he described at length the processes of reincarnation, but we must keep in mind the note of caution of *Phd.* 114d, to which we can add *Meno* 86b-c. In this sense the problems of innatism, of when and where we acquired our innate knowledge, of how we are connected to it, which continue to puzzle the commentators, will stay in the background in my analysis. What I want to emphasize, instead, from the slave-boy 'experiment' is that the solution of the paradox consists in the recognition of something as the reason of our beliefs. Through the

[150] On the religious background of Plato's theory of recollection see Scott (2006: 92-7).
[151] Here I present the theory as a consistent account, but I am aware that this is not uncontroversial. Cf. Williams (2002: 132), who mentions some alternative interpretations, but he himself considers the theories of the *Meno* and of the *Phaedo* as the same one on the whole, like Gentzler (1994: 286, n. 55).
[152] For an in-depth discussion cf. Vlastos (1994), Moravcsik (1994), White (1994), Scott (2006: 75-91).

recollective process, our beliefs can be tested, changed or confirmed, but only in virtue of a principle removed from the everyday life, they are definitively stabilized. As Vlastos (1994: 97) points out, recollection leads to "the perception of logical relationships". The final result of recollection is the progressive disclosure of a realm of logical nexuses akin in themselves, which, like the ropes that bind the statues of Daedalus (97d-98a), give access to the underlying pattern the physical world conceals. As to the paradox of inquiry (according to which, whether one knows or does not know what he is looking for, inquiry turns out to be unnecessary or impossible), it is still not resolved, but it may have a self-evident solution: when it arises the inquiry has already begun. For Meno misinterprets his incapacity to give a definition which can resist the elenchus as a mere negative moment of the inquiry, because while any attempt at giving a definition fell short of Socrates' cross-examination, it is nevertheless an important part of the inquiry itself, since it allows the interlocutor to get rid of his groundless conceptions and makes him aware of the instability of the beliefs he acquired through his education and experience.

In the *Meno*, Plato presents an ultrasensible solution about the nature of the objects of knowledge. We can isolate three stages of this formulation. Firstly, the true philosopher recognizes the inadequacy of common opinions, even when true; human beings, in fact, can use some criteria of organization of their cognitive experience,[153] but they seldom reflect upon them, thus never being able to give a consistent explanation for their convictions.

The completion of this inquiry is condensed as a journey of the soul in many dialogues of the 'middle period'. The knower must complete a vertical movement of withdrawal from the world to discover what provides foundations to the logical relationships we have seen in the particular instances; in addition, this inquiry allows the subject to reach a whole realm of such concepts, which now he identifies as the true world. This seems to be the gist of Plato's mature works: there is no reason to reduce this mythological exposition, often very detailed, to mere allegory, but it must be very likely considered Plato's holistic answer – at the same time philosophical and religious, mundane and eschatological – to the inherited problems of cultural transmission.

In this sense, the first proof Plato offers of the immortality of the soul in the *Phaedo* (72e-73a) is to be considered a continuation of the arguments of the *Meno*:[154] the pre-existence in us of what we are recollecting guarantees the possibility of recollecting it, thus compelling the

[153] Cf. Ferejohn's (2006: 224-5) criticism of Scott (1995), who tends to debase pre-philosophical acquaintance.
[154] Cf. Rowe (1993: 163-5).

philosopher to postulate the pre-existence of the soul itself.[155] But in what follows Socrates reintroduces sense-experience in the explanation of *anamnēsis*. For if we try to account for the singular events of recollection, we have to admit that the starting point of the process is always a particular object or event, which reminds us of something else, that we must have experienced previously. From a descriptive point of view, experience teaches that the senses trigger recollection (ταῖς αἰσθήσεσι χρώμενοι: 75e), but ontologically, the direction must be inverted, since we should have previously acquired a grasp of the equal in itself before we can recognize particular cases of equality. In other words, the Forms supply us with the conditions of organization of reality, otherwise unrelated and chaotic. In that respect it is interesting to consider Scott's (1995: 13-86) position on the attribution of recollection to philosophers only. Certainly, he is right in his criticism against the excess of a 'Kantian' interpretation of Platonic recollection as a feature common to mankind, but nevertheless in considering *anamnēsis* as a 'philosopher's thing' he underestimates the claim that "the soul which has never seen the truth can never pass into human form" (249b; transl. by Fowler). Thus, having in us some truths – the philosophers' souls have seen all of them, while the others but a few – is a marker of humanity: even if recollection of the Forms will be a complex process, still the capacity for activating this process defines us as humans. The difference between the philosopher and the other destinies Plato enumerates at 248d-e is that specialized men will be able to have a partial grasp of that realm, while the philosopher will be able to carry out an inquiry on the Ideas *per se*. For an opposite – 'quasi-Chomskyan' – standpoint cf. Gentzler (1994: 292-3), who suggests that "these innate beliefs constrain our conceptualization of the world as an 'innate representation of a universal grammar' may constrain our use of language".

A very good point Plato makes is the possibility of establishing recollective connections between both similar and dissimilar items. We can recognize (ἔγνωσάν) the lyre and be reminded of the beloved who possesses it, or we can see Simmias – or even his portrait[156] – and be reminded of his friend Cebes (74d-e).[157] So Plato concludes that we had seen previously

[155] Suddenly, Socrates produces this argument as a proof of the immortality of the soul, even if it is not a straightforward conclusion. I cannot linger over this topic, but it is clear that the contents the soul possesses might have been acquired in a former life, not necessarily in the very beginning of its existence, even supposing that the soul does not come into being in a specific temporal point. Perhaps, this straining is meant to strengthen the idea that the Forms are atemporal entities and that a soul without them is not even conceivable.

[156] From an Aristotelian perspective, it is interesting that Plato accords some value to artificial representations here: it seems that the image, even if Plato radically questioned the value of mimetic arts, can serve as a token of something else.

[157] Ackrill (1973: 180-7) gives a valuable account of this passage. He points out that this example of reminding can be split into two logically independent moments, namely the recognition of the object in itself and as a reminder of something else. On this point, cf. also Scott (1995: 57) and Dimas (2003: 206-7).

what makes thing similar (or dissimilar) and this must have happened before we started using our senses, i.e. before the very moment of our birth, thus testifying to the pre-existence of those paradigms and the soul (74e-75d). Now Plato has to argue that we have forgotten this knowledge at birth and he described this process in well-known myths in *Phaedo* 107b-115a, in *Phaedrus* 245c-257b and in *Republic* X, 613e-621d.[158] A single point of the Myth of the Charioteer can be discussed here: in my opinion when at 249b-c Plato points out that men understand when they unify numerous perceptions into a unity by means of calculation (λογισμός) and thus in virtue of the Idea (κατ᾽εἶδος), he is once again referring to the capacity for organization of perceptions and thoughts recollection entails.[159] For Plato learning and recollection are coextensive because both are rooted in the recognition of what allows the calculation of the 'cause' (αἰτία); so, Plato's account is mainly focused on the stabilization of propositional knowledge. This aspect is very well explained by Scott (2006): the kinship of nature mentioned at *Meno* 81c reveals how the pieces of knowledge should not be considered as autonomous atoms, but particular attention must be paid to the "associative links" they bear (129), or, as he argues later, recollection is to be considered as "the synoptic mastery of a whole domain" (179), the progressive discovery of a pattern in the guise of a constellation of concepts (that will be the Forms in other dialogues).

As this sketchy treatment tries to prove, *anamnēsis* is one of the most original Platonic conceptions, but its relevance in his thought goes far beyond a simple description of a human faculty. However, in what scholars believe to be late dialogues, Plato reconsiders the simple capacity of retention as fundamentally based on sensible acquisition[160] and gives various accounts of memory, which have been very important in the history of philosophy. Surprisingly, it must be noticed that such successful models did not seem to meet the approval of Plato himself.

Before setting out those models, at *Theaetetus* 163b-164c Plato makes some general observations about memory. Unlike Aristotle, he considers memory an intellective faculty; for mediation intervenes between sensation and what is retained in the soul. In fact, sensation and knowledge are not the same, since the latter entails some form of structuring the raw material of sensation before it is stored in our soul and in this guise it will be remembered. For instance, in the case of the language of barbarians, we can perceive the sounds of the word, without

[158] The theme of the judgment of souls can be found also at *Gorgias* 522e-527e.

[159] The role of the Forms in the organization of the particulars must not be misunderstood as a necessary condition for the act of recollection. Conversely, in *De Anima* Γ 11, 434a7-10 the *logismos* is bound to act upon historically acquired materials. Synthetically, we can reduce the two models of *logismos* to their directions: while the Aristotelian one is a bottom-up process, the Platonic use of calculation has a clear top-down direction.

[160] In opposition to recollection, Plato believes that 'memory' etymologically "expresses rest in the soul, not motion" (*Crat.* 437b; transl. by Fowler).

grasping the sense of them and we will retain them according to our understanding. Thus we can perceive (and remember) the sounds they produce without knowing the meaning. This process is described by Ackrill (1973: 182) for the case of recollection. What can remind me of Simmias is not only the lyre *qua* a lyre, but also "a dark lumpy object sticking out from under the curtain" we do not recognize as a lyre can serve as a reminder: "the explanation will be in terms of features or aspects which we noticed, identified, or recognized". Thus, what is required by any mnemonic activity is not full-fledged knowledge of the object, but at least some form of recognition of it. In this respect, it is not possible that a subject does not 'know' what he remembers (163d).[161]

Then Plato introduces the two main paradigms of memory in the *Theaetetus*, which are the Wax Block (191c-196d) and the Aviary (197c-199b) models. The former, in particular, was a manifest inspiration for Aristotle. It is introduced by Plato in the attempt to account for the possibility of false beliefs.[162] The strained etymology that connects wax and heart based on Homer makes us think that this could be an older conception, perhaps not fully developed, but somehow already present in Greek culture.[163] Probably for the first time, Plato gave a rudimentary physiological explanation of the model (191c-d; 194c-195b), which Aristotle certainly borrowed. I would not linger too much on this model because it is a *locus classicus* in the comparison between Plato's and Aristotle's theories of memory, and Lang (1980) is an important inquiry about this topic: therefore, I shall try to notice a few original ideas that the comparison of Plato's and Aristotle's texts suggest.

Socrates supposes that human beings have something like a wax block in their souls and that one makes impressions upon it of his sense-perceptions and thoughts leaving an imprint like the stamps from signet rings. Thus, what leaves a trace in the block is remembered by the subject, what is effaced or is impossible to impress is forgotten or not known. Indeed Plato was the first to implement a physiological model so as to explain mnemonic failures with the constitution of the wax block in us. Of course, in Plato this remained a rough analogy and Aristotle dropped the crudest elements. For example, the block can be impure, or that the size of the block determines in each of us the amount of storage of impressions with the consequent

[161] Incidentally, it is intriguing to notice how Aristotle's frequent manifest borrowing of the expression according to which memory is "of things a man has learned or perceived in the past" (transl. by Chappell) (ὧν ἔμαθε καὶ ὧν ᾔσθετο) is not merely terminological, although this expression reflects the different contexts. Starting from Plato's considerations, I believe that Aristotle tackled more directly the problem of recognition introducing the faculty of *phantasia* (cf. below [3.1])

[162] Very good reconstructions of this argument can be found in Cornford (1946: 120-30), McDowell (1973: 209-19), Bostock (1988: 176-85), Burnyeat (1990: 90-105), Chappell (2004: 172-83).

[163] At 194c4 with φασὶν Plato seems to allude at least to someone else holding this conception. For a rather skeptical position about this possibility see Cornford (1946: 127), who believes that this model is "anything more than an illustration".

possibility of having overlapping imprints. What Aristotle did retain in his model is the influence of the consistency of wax – if it is too hard the impressions have trouble fixing, if it is too soft they easily fade away once imprinted. However, Plato considered those whose wax block has the right consistency as being good both at learning and remembering, while Aristotle will articulate more carefully this point, since the quick-witted, who learn more quickly, undergo a more intense movement that provokes a faster erasure of the trace. In that respect, Socrates' hypothesis seems to be less dynamic, because, once imprinted, there is no internal influence on the imprints. Furthermore, 194d suggests that there is not a direct influence of the external world on the block, since we hold the tablet and make the impressions by ourselves, stamping both perceptions and conceptions (ἔννοιαι) in the wax.[164] However, for Socrates this model explains true judgements when I correctly associate a new perception with a trace already in me: judgements are nothing more than the recognition (ἀναγνώρησις) of the agreement between these two elements. Thus a false judgement consists in mismatching the perception and the trace (193b-d). But this model is rejected[165] by Plato because it does not account for false judgements about abstract concepts and in particular about arithmetical objects (195e-196c).[166]

On the other hand, in some other passages Plato seems to recall this model, which demonstrates an important persistence in his thought. Later in the *Theaetetus* (209c-d) the peculiar features of the objects are inscribed in us – ἐνσημηναμένη – like distinguishing marks and are what allow us to recognize an object starting from a significant feature among others. In *Ti.* 26b-c Critias describes his youthful memories as encaustic paintings inscribed indelibly; more generally, at 45d-46a Plato hints again at a physiological conception of internal processes compatible with the wax block model saying that some residual movements in some parts of our body can cause the representation of images (φαντάσματα) in our dreams, which can be remembered by the sleepers when they awake, opinion that will be clearly another 'source' for Aristotle.

The *Theaetetus* Aviary model was less relevant for Aristotle's *De Memoria*, and yet it has some points of interest for us. After the rejection of the Wax Block model, Socrates suggests

[164] Chappell (2004: 182) points out the deliberate action of the subjects who generate the imprints, a fact that makes Burnyeat (1990: 100-1) doubt that this is an authentic empiricist account.

[165] Actually, there is no agreement among commentators on this point. For Cornford (1946: 129-30) the rejection of the model for abstract beliefs does not mean that it should be discarded for the other cases it explains. But Chappell (2004: 181-2) is probably right in his claim that "Plato's intention is to show that it is *completely* inadequate" (Chappell's italics), because this model takes for granted a kind of sensorial acquisition and alteration of the soul Plato would not accept. Indeed, 196c testifies to a very strong rejection of the model.

[166] In that respect, it is very interesting to note that Annas' (1992: 300-4) argument in support of the separation of personal and non-personal memory has a strong Platonic flavour: for, in her opinion, it would be difficult for us to say that 2+2=4 belongs to our past experience.

another analogy to account for false beliefs concerning non-perceptible items. Thus he suggests that Theaetetus imagines that human beings have an aviary within themselves[167] so as to introduce an important distinction between holding (ἕξις) and possession (κτῆσις) of knowledge (197b). This is again an empiricist analogy, since the aviary is supposed to be empty at birth and the birds/pieces of knowledge are caught throughout our lifetime (197e); this is in explicit contrast with the theory of recollection it has been sometimes compared to. The knower here is engaged in two different kinds of hunting (θῆρα): firstly, he will catch the birds, i.e. the pieces of knowledge, and put them in his aviary, and will acquire a dispositional knowledge, but only when he will hold them in his hands again he will be exercising that latent knowledge. These will be two prominent points in Aristotle's treatise. In the account I discussed in the first chapter, the difference between memory and remembering is essentially based on the polarity between ἕξις and ἐνέργεια, in which the activity of remembering takes part, even if in Plato the ἕξις is not the disposition, but the actualization; furthermore, the metaphor of the hunt Aristotle uses to define recollective processes (451b18; 453a22) is clearly borrowed from Plato's aviary.[168]

However, Plato found this model inadequate to account because of the possibility of falsehood without infringing the rule according to which knowledge cannot cause ignorance. For the same reason Theaetetus' suggestion to introduce in the aviary some 'birds of ignorance' must be rejected. As we can see, Theaetetus' proposal is even less explanatory than the former one, because it does not include any recognition of the objects, thus excluding any possible explanation of false beliefs. In fact, Chappell (2004: 189) remarks that he who sustains this model does not comprehend that "thought cannot consist merely in the presentation of a series of inert 'object of thoughts' [...] the thinking is not so much in the objects of thought as in what is *done* with those objects".

Finally, in the *Philebus* Plato introduces memory and recollection in his attempt to examine exhaustively the forms pleasure can take in our experience (31b ff.). First Socrates reminds Protarchus of the pleasure given by health and harmony, and of the one caused by the restoration of those conditions, e.g. the replenishment with liquid when someone is thirsty (31c-32b). In addition, another form of pleasure and pain can be described: our soul, without the involvement of the body, can have the anticipation (προσδόκημα) of future pleasures and pains (32c-d). Then, Socrates states that this kind of pleasure is completely dependent on

[167] For an analysis of this model see Cornford (1946: 130-60), McDowell (1973: 219-25), Bostock (1988: 176-185), Burnyeat (1990: 105-19), Chappell (2004: 184-192).
[168] Aristotle used this analogy in other works too (*An. Pr.* A 30, 46a11; *An. Post.* A 14, 79a24-5; 31, 88a3; B, 13, 96a22).

memory (33c), and this obliges him to clarify what this faculty is. Notwithstanding the rejection of bodily analogies in the *Theaetetus*, the description Plato puts forward in the *Philebus* is strictly related to bodily occurrences. In fact, the distinction drawn by Socrates between affections (πάθη) that reach our soul or not is only a quantitative watershed and not a qualitative one; for some affections do not exceed the threshold of body and leave the soul unaffected and incapable not only of experiencing pleasure or pain, but also of perceiving (33d-e): αἴσθησις remains the only source for memory, which can be defined as preservation of perception (σωτηρίαν αἰσθήσεως: 34a). The ensuing definition of recollection is quite surprising, because there is no mention of Plato's 'theory of recollection', since recollection here is defined as the capacity of the soul for retrieving by itself (ἐν αὐτῇ) what it had previously experienced together with the body, even after the loss of memory. This will establish the basis of the definition of desire as the state of being in an actual painful state, but at the same time having contact with the restoration of the state of equilibrium through memory, i.e. without the involvement of the body (35b-c).

Once again the importance of recognition is fairly important in Plato. Memory and recollection concur in structuring our experience, since they coordinate past experiences with future expectations. The result of mnemonic capacities is inevitably an organization of the perceptual sphere that, on the one hand, orients the subject towards the restoration of the bodily equilibrium on the basis of the inner stimuli and, on the other, mediates the bulk of bodily acquisitions breaking the scheme of immediate action/reaction towards the environment thanks to the connection of the three temporal levels. In that respect, this model, not anymore in the form of a metaphor or an analogy, is truly 'empiricist' and seriously takes into account the consequences of an acquisitive model of memory. For instance, Socrates mentions, without developing it, the 'first-desire problem', which must be considered in the case of newborn babies who experience pain and pleasure for the first time, but, as Frede (1993: 37, n. 1) argues, these kinds of affections must be generally conceived as "*intentional* (object-directed) states, since all involve memory".

Shortly afterwards (38b ff.), Plato mentions memory again in addressing the issue of true and false judgments. Memory assumes now a new important cognitive role in the interpretation of reality and we can find an implicit distinction between the passive function of retention and the activity of representation in this new treatment. The soul is compared to a book, in which a scribe takes note of the information supplied by perception, true or false as the case may be.

When prompted by a new perception, another craftsman in us, a painter, draws an image[169] according to what the scribe has written and this picture will be used by the subject to formulate a judgment about this perception, e.g. whether the figure I see under the rock is a man or a statue. Different observations can be drawn from this account. Firstly, it seems to be connected with – or it may be a revision of – the Wax Block model; for the explanation of false judgments consists in mismatching the actual vision and the picture painted by the inner craftsman; however, now the model is very slightly off-balance toward the account of judgments based on sight. Even if Plato says that judgments can be taken by any other sense, it is difficult to imagine – and Plato does not give any hint about it – how an artist may represent olfactory or gustative 'pictures' to compare with the present ones. Secondly, the work of the scribe is similar to guesswork based on the interpolation of raw sensible data that affect the body and the soul towards a coherent token to be retained. He acts as a filter between the external stimuli, selects only the significant ones and codifies them in a script 'readable' for the painter; once again, this activity implies an organization of our perceptual sphere so as to create a mnemonic trace.

In conclusion, Platonic reflections on memory and recollection represent a turning-point in the history of philosophy. For the first time an organic treatment deals with memory as a complex of activities and capacities related to the individual, treatment that questions the traditional ways of producing and transmitting cultural. The process of secularization is not yet concluded in his 'theory of recollection', which, however, considers the individual knower as the focus of the activity. Therefore, Plato rejected the idea of memory as a set of traditional beliefs externalized in a static poetic repertoire and at the same time the new technical conception proposed by the sophists who turned this externalization into a thorough *technē* through the diversification of the supports (e.g. written records, mnemotechniques, etc.). Plato also was the first philosopher to inquire on the mechanisms of acquisition and retention as well as that of retrieval ones and how they participate in shaping our cognitive world.

Plato's contribution fixed some fundamental questions later thinkers would face again. What I think is worth being reminded of again is the introduction of the theme of recognition. It seems to be a central issue in all the models discussed by Plato. In fact, whether we consider the objects of our mnestic or anamnestic activity as objective, like the Forms, or as coming from the past experience of our present life, the main problems the philosopher has to tackle are the possible solutions to the paradoxes of inquiry and discovery expressed by Meno. The existence of a mnemonic support does not guarantee the retrieval of its contents in any way, the

[169] Obviously, Plato here admits that painters' images can be faithful likenesses and not semblances. Cf. above, pp. 64-5.

philosopher must explain the mechanisms that allow the subject to remember or recollect starting from that support. Moreover, it is highly significant that the models of the *Theaetetus* are proposed to account for the possibility of false beliefs, since memory will be a cognitive activity with a high rate of error, just as for Aristotle. On the other hand, when the focus is shifted to the results of the process, like in the theory of *anamnēsis* and in the *Philebus*, it is remarkable the importance Plato accords to these results in constructing our cognitive world. In different senses, these two works show how recollection establishes rational nexuses in our experience making it intelligible. Another element, apparently less close to this topic, will be relevant for Aristotle. The twofold status of the image defined in the *Sophist*, at the same time being and not being, will be decisive for the idea of memory as an image of something past, which is now absent in the external world, but at the same time present in the representation that the remembering subject pictures before his mind's eyes.

3. The *De Memoria* within Aristotle's psychological theory

The decline of the traditional role of the poets corresponded to the rise of new intellectual figures, who applied poetical techniques to other fields. In this context the use of images and the awareness of their power in memorizing became more and more important. Small (1997: 74) remarks that the practice of *ekphrasis*, i.e. "conjuring mental images of the scene" depicted in a painting to describe it, assumed an important role in the education of rhetors in the Hellenistic age. As Coleman (1992) shows, Aristotle was certainly interested in training methods in rhetoric and in the use of iconic supports for the improvement of rhetorical and dialectical skills. For instance, at *Rhet.* Γ 12, 1414a8-17 he compares the style of oratory to the art of σκιαγραφία, especially used as the backdrop in dramatic performances:[170] the particular technique of depicting shadows was used in this art "to produce an illusion of solidity at a distance" (LSJ [1996: 1609-10]). In speeches addressed to large gatherings of people, as in the assembly, sophisticated details may prove self-defeating for listeners with a distant point of view, who need a general picture of the fact, while before a limited and qualified audience, as in the case of forensic debates, the rhetor should pay much more attention to the details, since the judges already know the outlines of the question. Elsewhere (*Metaph.* Δ 29, 1024b21-6) Aristotle associates scene-painting and dreams as equally delusive. Again he describes the ontological status of these phenomena as Plato did in the *Sophist* (239c-240c) concerning the εἴδωλον, saying that they actually are something, but not the things the φαντασία appears to represent: in that respect they are not and are false.

Likewise Aristotle inquires into the rules of poetical composition carefully considering fruition as an important feature of artistic experience. In that respect, he promotes what enhances memorability for the audience; at *Poet.* 7, 1450b34-1451a7, he suggests the poet composes unitary and coherent 'plots' (μύθοι), namely a 'whole' (ὅλον) that has definite starting, middle and ending points, for a well-structured plot is easy to remember. But it is even more important for our discussion that for Aristotle the length of a tragedy must meet the further requirement of being limited.[171] To show this, Aristotle resorts to an analogy: since beauty resides in order and size, the length of a tragedy ought to be embraced by the audience in a single span of attention to avoid mnemonic efforts, detrimental to fruition. Just in the same way, it is easier to grasp a size taken in at a single glance and this characteristic makes the

[170] It is interesting to note that Sextus Empiricus, *Math.* VII, 87-8, mentions two philosophers, Anaxarchus and Monimus, who are said to have likened τὰ ὄντα ('things') to σκηνογραφία ('scene-painting') and to the experiences caused by dreams or madness.
[171] Cf. also *Probl.* XVIII 9, 917b8-12.

object beautiful; for in a very minute animal or in a very big one, no one can appreciate the proportion as one could do in the case of a creature observed all at once by the beholder. Therefore forcing the audience to bring together the pieces of their perceptions to form a single image of the plot is not recommended by Aristotle to the tragedian because any act of unification entails to a certain extent distortion, or at least effort. My aim in this section is to show how Aristotle applies the same strategy to his theory of φαντασία and how the analogy he makes here with the size of animals is revealing of the approach he takes in the description of that faculty and how unifying and merging processes will play an important role in the formation of experience.

However, Aristotle considered the problems of memorization and memorability also in rhetorical contexts demonstrating that he is far more sensitive toward mimetic activities than Plato; but he too saw corruption in public life when Gorgias first introduced a ποιητικὴ λέξις in rhetorical speeches, thus mixing techniques that should be separated, so as to deceive the audience (*Rhet.* Γ 1, 1404a24-9). Actually, a proper speech should not go beyond the mere proof of the bare facts (1404a5-7), thus little room remains for the study of the modes of delivery, even if they deserve some attention insofar as speeches are addressed to listeners; therefore speeches must be fashioned in accordance with the φαντασία one wants to produce in the hearers, whereas no geometer would ever use such embellishments (1404a8-12). As for poetry, the parts of the speech should be easily memorable[172] and a good epilogue consists in the recapitulation of the topic discussed,[173] in short, ordered and numbered items are thought to be easier to remember, like verses in comparison with prose (*Rhet.* Γ 9, 1409b4-8).

Moreover, memorization was a prerequisite for a dialectician and of course Aristotle considered it necessary to instruct his students in mnemotechniques to face eristic opponents in disputes and, unlike Plato, he probably theorized their use in those contexts. However, primarily he marked the difference between his methods and sophistic approaches. At *Soph. El.* 183b35-184a4 Aristotle describes the rote memorization implied by Gorgias' technique as the imposition of the products of an art, whose rules may remain unknown by his pupils. Moreover, the teachers of eristics used to hand out prepared sophistical arguments to be learned by heart, structured as a set of question and answer that was supposed to cover the main problems of the

[172] Two examples will be enough for our purposes. At *Rhet.* Γ 5, 1407a20-6, Aristotle says that in a couple of connecting words (like μέν...δέ), the correlative term must be introduced before the first one has been forgotten, namely without an excessive distance between the two; a 'period' is instead defined (*Rhet.* Γ 9, 1409a35-b1) as a limited portion of text with a beginning and an end, in addition it should be covered by a single glance (μέγεθος εὐσύνοπτον).

[173] More correctly, reminding one of the arguments (ἀνάμνησις) is the fourth and last part of the epilogue of a speech (*Rhet.* Γ 13, 1414b12-3; 19, 1419b27-1420a8) and allows one to give the hearer a complete picture of what has been previously demonstrated.

argument in question; what results, though, is only an apparent and unsystematic knowledge. Still, Aristotle does not exclude the possibility of correct use of memorization: in *Top.* Θ 14, 163b17-33 he suggests learning by heart some basic elements or propositions to be able to master the whole argument under which they fall. To corroborate this claim, he gives the example of people who have a trained memory and are able to remember the thing they want just mentioning the 'place' (τόπος) in which they had previously classified a pattern of argument to recall; furthermore, those practices to a certain extent imply the use of imagery and Aristotle had probably devoted an autonomous work to the subject (Sorabji [2006: 26; 29]). I will not linger over this topic any longer, since Sorabji (2006: 22-31) has given a very convincing account of it in his essay on mnemonic techniques.

I shall try, instead, to raise some objections to the use of this technique as an *explanans* of the controversial passage 452a17-24 in the *De Memoria*. Sorabji (2006:31-4) considers the text a description of what he calls the "technique of mid-points" and many commentators have found this solution to be definitive. Still, I shall individuate some weak points of this interpretation. Firstly, even if we consider the mnemonic technique of *Top.* Θ 14, 163b17-33 as a model for *Mem*. 452a17-24, it is worth noting that Aristotle introduces the latter discussing recollective processes, while the former passage seems a short-cut to avoid recollection in a sort of 'meta-anamnestic' pre-organization of the material we want to remember later. The result is a 'map' of places through which we instantaneously *remember* the item placed in a given point (εὐθὺς [...] μνημονεύειν [163b17-33]); no recollection seems to be implied here, since no effort must be done to retrieve a composite – but single – image, while we know that recollection is essentially a ζήτησις (453a12). Secondly, in the last section of this chapter I shall try to argue that even if Sorabji's textual reconstruction of 452a17-24 is by far the best one among those attempted,[174] still it does not seem to describe a successful case of retrieval.

In addition, we should notice that the positive opinion Aristotle seems to have of mnemonic techniques in the *Topics*, even if we admitted for the sake of argument that Aristotle suggested using them, instead of simply drawing an analogy, could be hardly extended to his psychological works. Indeed, it is striking that only one explicit remark about the improvement of one's memory can be found in the *De Memoria* (452a12), if the claim on the utility of frequent recollections to separate sharply the modalities of retrieval (451a12-4) is to be considered a quite general statement and not a specific prescription for would-be mnemonists; in any case, a technique of mid-points is not required here. In other occurrences Aristotle

[174] It has been widely accepted by scholars: cf. Cooper (1975: 65-6), Coleman (1992), Annas (1992: 298, n.3), Bloch (2007: 236-9).

directly refers to the place-system technique, but it is difficult to attribute to him some commitment to it on the basis of those passages. At *DA* Γ 3, 427b18-20 the mention of the 'places' that someone exploits to improve memorization is used as a secondary confirmation of the possibility of visualizing an internal content or even as a parenthetical curiosity and at *Insomn.* 458b20-5, again about visualization, Aristotle says that some people believe themselves (δοκοῦντες)[175] to place a further image apart from the dream according to a mnemonic rule: this seems to enhance the memorability of the dream itself. Thus, the mention of 'places'[176] at *Mem.* 452a12 should be read carefully in the light of Aristotle's caution; for he introduces with a dubitative form (δοκοῦντες) the claim of those who declare that they recollect in that way. A direct commitment to those practices by Aristotle does not emerge from these lines, nor does an essential role of mnemonic techniques in describing physiological activities: they seem to be always used as explicative examples and the philosopher maintains an underlying detachment from them, unlike the possibly favourable tone found in the *Topics*.

In conclusion, I shall try to reverse the order used by Sorabji in his study, taking the Aristotelian psychological reflections as the basis of any possible mnemonic technique, instead of considering the latter as a model for the former. The first step is to consider Aristotle's conception of *phantasia*, trying to compare Sorabji's imagistic proposal with other interpretations.

3.1 The role of *phantasia* in the *De Memoria*

Sorabji's (2006) tight connection between the mnemonic technique of mid-points and a pictorial conception of the *phantasma* involved in remembering as in the modern idea of imagination represents the height of the explanatory power of the imagistic conception of this 'bridging' faculty of the soul, i.e. *phantasia*, and at the same time an opening for numerous attacks from different standpoints. However, considering *phantasia* as the presentation of an internal image remains the 'canonical theory' of *DA* Γ 3 (Wedin [1988]), although some authors[177] have emphasized the latent inconsistency of a treatment of a faculty that seems to be

[175] The exact phrase is οἷον οἱ δοκοῦντες κατὰ τὸ μνημονικὸν παράγγελμα τίθεσθαι τὰ προβαλλόμενα ("Those, for example, who believe themselves to be mentally arranging a given list of subjects according to the mnemonic rule" [Barnes]: 458b20-2), where δοκοῦντες can be interpreted as referred to the belief of the dreaming mnemonist in superimposing an image on his dreams, but in theory Aristotle could also mean that they believe to do it, while they are not doing it: either way, Aristotle does not suggest adopting such a technique, he is only referring to it. For a concise summary of the discussion of this passage, see Repici (2003: 159).

[176] Since the subsequent passage does not seem to be an example of a 'place-system', it has been suggested that we should emend the text in ἀτόπων (Bloch [2007: 43, n. 29]), a solution that could fit the passage very well.

[177] In particular Schofield (1979) and Frede (1992: 281).

wavering between perception and thinking. Furthermore, notwithstanding the number of criticisms against an imagistic, or even pictorial, conception of the *phantasma*, this paradigm remained unscathed for the *De Memoria* even for authors who tried to reconsider the conventional position.[178]

Only recently some voices of dissent rose against the plausibility of picture-like images as a comprehensive account of *phantasmata*. In his review of the second edition of Sorabji's translation, Pavelic (2006) points out the difficulties of postulating quasi-visual occurrences of *phantasmata* instead of admitting 'images' from other senses as well. His mention of *Sens.* 1, 437a15-7 is quite appropriate, but not definitive. Here Aristotle argues that among the blind and the deaf-mute from birth the former are more intelligent because rational discourse is tied, even if accidentally, to audible words; sight instead brings about many more discriminations and contributes greatly to perception of common sensibles, but much less in the formation of abstract thought. However, another passage about blindness in the *Eudemian Ethics* seems to me even more relevant. At *Eth. Eud.* Θ 2, 1248b1-3, the blind are said to remember better not only than other disabled people but than anyone else, since they are not distracted by visible objects. Again, this claim would be striking if some visual or quasi-visual activity was *essentially* involved in *phantasia*.

Pavelic's remarks are however the outcome of a reflection developed in the last decade after the doubts expressed by Nussbaum (1985: 228) about the exclusion from *phantasia* of 'images' deriving from non-visual sources. In fact Modrak (2001: 234-7) had already included all kinds of sensuous 'images' as support for memory, without letting the role of resemblance drop. Caston (1998) is indeed the most radical commentator among those who deny the imagistic terms often used to describe the *phantasma* (283): the only imagistic sense admitted by him is that the 'image' is "capable of *producing* quasi-perceptual experiences" (283).

More generally, the two metaphors of the signet-ring and the picture must be kept apart no matter how ancient the "alliance between *eikōn* and *tupos*" (Ricœur [2004: 51]) is. In the *Philebus* Plato clearly distinguishes the moments of encoding and decoding mnemonic traces in two different actions performed by two different 'artists' in the soul (38b ff.) and albeit Aristotle conflated these two facets in a single process, he maintained the theoretical division in

[178] There are of course different nuances in each case: while Lang (1980: 385) goes even further speaking of 'portrait', Annas (1992: 304) believes that the *phantasmata* involved in remembering are to be conceived as "images in a very literal way". Nussbaum (1985: 231; 249-50) and Schofield (1979: 119) admitted the presence of 'picture-like elements' in memory; Nussbaum observes the function of resemblance in that activity and from this remark she concludes that imaging has a place, but not "theoretically central" in *phantasia* (268). More sophisticated, although after all inconclusive, is Bloch's (2007: 64-70) position, for he claims that a non-physical facet in memory is entailed by the pictorial nature of the images, but the reference to images must be intended to be "to some extent metaphorical".

the nuance of the root μνη- declined as a noun or as a verb,[179] with which he respectively stresses the retentive and the representative facets of the mnemonic capacity. For considering the two actions as personified by two different artists poses the further problems of how they are related and communicate, since Plato does not explain why he introduces two different codes and why the painter, who has to master both the codes, must rely on the scribe to take the notes. Actually, bridging the gap between the trace encoded and its presentation after some time has passed from the original experience is the focus of the entire first chapter of the treatise;[180] in this sense a veiled criticism against the theory of the *Philebus* might be read, since Plato recognized the two operations but he did not explicitly relate them.

In my opinion, an imagistic account of *phantasia* does not solve this aporia, while different approaches would give a better strategy for tackling the problem. Needless to say, such a thorny issue cannot be treated exhaustively in this thesis, but I shall try to show how the *De Memoria* does not require a literalist interpretation of the image presented, while the 'seeing-as model' often proposed[181] copes much better with the very diverse range of activities of this faculty. Firstly, *phantasia* is not a full-fledged faculty, because it does not have a specific object (Wedin [1988]), but the material it works on is supplied by sensation. Attributing a pictorial form of presentation to it would be a strong discontinuity with Plato's use of the word, which was focused on *phainesthai* as alternative to reality and reliability, respectively in an ontological and in an epistemological sense.[182]

Actually, at *DA* Γ 3, 427b18-20 Aristotle seems to suggest that a form of 'image-producing' (εἰδωλοποιεῖν) takes place in *phantasia* and this is a fundamental passage for those commentators who have recognized the visual nature of presentations.[183] This conception of imagination is admittedly drawn from modern British empiricists[184] but Nussbaum (1985: 225-7) and Wedin (1988: 90, n. 49) warn against the consequences that what the latter calls a "naive view of the images" would come up against. To single out just the most serious threat of this position: the image in itself does not have any intentionality, i.e. it does not intrinsically refer to

[179] Cf. above, pp. 9-14.
[180] Sorabji (2006: 14) is aware that the relation between the impression and the image was not immediate, but the relevance of this point has been completely appreciated only by Caston (1998: 257-8), who calls this aporia "the problem of presence in absence".
[181] In various forms, this model could be ascribed to Nussbaum (1985), Frede (1992), partially Wedin (1988) and with a marked interest in intentionality to Caston (1996) and (1998). *Phantasia* in this model plays a fundamental role in the interpretation of sensible data. After that, its cognitive outcome has been interpreted as a complex perceptual structure (Frede) or as being essentially the bridge between internal states and the πράγματα (Caston).
[182] Cf. Nussbaum (1985: 242) and Schofield (1979: 120).
[183] E.g. Hicks (1907) and Hamlyn (1968).
[184] The tight adherence of the two ideas of imagination is the guideline of Sorabji's edition (2006: 1 and *passim*). The problematic nature of this association is instead brought out by Nussbaum (1985: 223) and Schofield (1979: 106).

any extra-mental object, as at the very least the *phantasma* involved in memory instead requires.[185] Certainly, sight has a privileged status among other senses in the description of this faculty, but Aristotle himself accounted for this singularity pointing to the privileged status of sight as the sense *par excellence* (429a2-4).[186] Once again, I mention the importance of the definition of εἴδωλον in the *Sophist* as a basic conceptual tool Aristotle had at his disposal for the description of an 'intentional' phenomenon. However, it is noteworthy that Aristotle used the word εἴδωλον very sparingly[187] and never in the *De Memoria*, where the term εἰκών is clearly meant to convey the idea of representativeness rather than mere depiction.

Before addressing again this issue, considering the end of the first chapter of the treatise, I want to show that the 'seeing-as model' is best exemplified by what Schofield called "non-paradigmatic sensory experience". As Sisko (1996) argues, a material component in the acquisition of the trace is required, and actually the cases of after-images (*DA* Γ 3, 428a15-6; *Insomn.* 461b22-3, but in particular 459a24-b23) as residual movements in the sensorium, even after the stimulus has ceased, are testimonies of the bodily derivation of the images. But *phantasia* cannot be reduced to mere passive impressions like sensation. In fact, at *DA* B 12, 424a18-9 the wax block analogy is used to explain that the reception of the form of the object without matter leaves no possible room for selection or elaboration,[188] whereas, in particular in the *Parva Naturalia*, the role of a "central faculty" that acts "as the point of convergence – of recognition and discrimination – between the special channels of external sensation" (Kahn [1979: 15]) clearly emerges.

Somehow, this faculty is at the top of a ladder whose first rung is αἴσθησις of proper sensibles, that does not entail – or at least, entails in the lowest possible degree – error; but starting from perception of incidentals, this possibility constantly increases until error seems to be a normal condition in the cognitive experience of animals (427a29-b2) and, in particular, for those which possess it, in the exercise of *phantasia*, for this faculty intervenes whenever the object is not perceived accurately (428a11-5). Therefore, my working hypothesis is that the *phantasma* is the result of the interpretation of raw sensible data (or the interpolation of unclear ones) in a recognition that tends to identify the object. The anomalistic cases of *phantasia*, like

[185] Therefore, I take the kind of φαντασία κατὰ μεταφορὰν referred to at 428a2 to be exemplified at 427b18-20, like Frede (1992: 280, n.3; 285) and Polansky (2007: *ad* 427b27) already did and not to be the central feature of Aristotle's theory of *phantasia*.

[186] Another famous passage on this privileged status is *Metaph.* A 1, 980a23-7.

[187] As far as I know, in the psychological works εἴδωλον occurs, except for this occurrence in the *De Anima*, only in the *De Insomniis* and in the *De Divinatione per Somnum*. For the most part, it is referred to an analogy concerning images reflected in water (*Insomn.* 461a15; *Div.* 464b9-14) or to the Democritean theory of emanation (*Div.* 464a6, 464a11), which already clarifies the non-purely visual nature of εἴδωλα; only in *Somn.* 462a11-8 Aristotle seems to describe εἴδωλα as a deceptive kind of *phantasma*.

[188] Cf. Nussbaum (1985: 258).

dreams, hallucinations, even memory-images, on which Schofield (1979) focuses, seem to be best explained by this conception. For instance, Aristotle thoroughly describes cases of apophenia, that is the recognition of a pattern where actually there are meaningless data, in its visual variation, namely pareidolia.[189] A paradigmatic case is the recognition of definite objects in the random shapes of clouds (*Somn.* 461b19-21). Interpolating underspecified data sets is a natural tendency of the animals that possess *phantasia* and it supplies much more veridical material to our experience than Schofield's restricted conception of *phantasia* (1979: 114-5) allows.

Schofield is right in his description of the phenomena as mainly deceptive, but he hastily equates the epistemic status of phenomena like hallucinations, dreams, fantasies on the one hand and memory-images on the other. I believe, instead, that Aristotle shows through anomalous examples the gist of what he intended with *phainesthai* on the whole. In normal conditions, the result of the interpolation of sensible data is scrutinized by a central faculty (the κύριον), which discriminates the identification and the opinative faculty (δόξα) eventually assents to it or refuses it. This is the reason why the subject is essentially detached from the appearance until it is examined (*DA* Γ 3, 427b23-4). On the contrary, in particular conditions like in dreams or in hallucinatory experiences, the κύριον does not examine the appearances and they "are taken as veridical by default" (Schofield [1979: 125]); likewise, some πάθη, like cowardice, anger or love, happen to alter the κύριον and its physical support: the stronger they affect the soul, the smaller the similarity required for the identification of the object we expect to see and consequently bigger the margin of error too (460b3-20).

What Aristotle stresses when he attributes a high degree of unreliability to this kind of presentation is indeed the constructive nature of this activity that merges the bulk of unrelated *aisthēmata* in a single whole; *phantasia* remains a source of cognitive content over and above *aisthēsis*, and is actually the primary source of motivation for animals (Nussbaum [1985: 255]). In the plainest case a *phantasma* is a collation of several *aisthēmata*, like in the case of *Poet.* 7, 1450b34-1451a7. Here, in my opinion, Aristotle describes the potential insufficiency of sensation for particular kinds of objects: in the case of a very big animal, we should relate different sights of it so as to have a unified picture, in the case of a small one, we have to picture ourselves the unclear elements. Another function that has been ascribed to *phantasia* is the creation of an overall perceptual structure,[190] in some sense a development of the operation by which the subject merges different *aisthēmata* of an item to have a single trace; here,

[189] For a definition of this phenomenon see Zusne-Jones (1989: 77-9).
[190] Cf. Frede (1992: 282).

instead, several images take part in the creation of a 'panoramic' view of many objects consisting in encoding the spatial relationship existing between them, and between them and the subject.[191] Therefore, in what is retained of an experience, there is something added, derived by interpretation, beyond the data supplied by sensation. Wedin (1988: 68), Frede (1992: 285) and Caston (1998: 262-3) seem to direct their interpretation towards the introduction of this further element; in other words *phantasia* "is image-producing insofar as images can be interpreted as forms or [re]presentational structures" (Wedin).

Actually, this element introduces a further important issue: a 'form' or a 'structure' is a whole in itself beyond the separate data and the analogy with the concept of *Gestalt*[192] is not improper, since Aristotle seems to hint at it in his distinction between 'voice' (φωνή) and 'sound' (ψόφος). Whereas many sounds are produced by animals, strictly speaking voice is restricted to the particular case in which the animated being emits a sound μετὰ φαντασίας τινός and σημαντικὸς γὰρ δή τις ψόφος ἐστὶν ἡ φωνή ("for voice is certainly a sound which has significance" [Hicks]: *DA* B 8, 420b31-3). In this passage, the imagistic interpretation is particularly weak, because it must postulate a "mental picture" (Hicks [1907: *ad* 420b32]), while animals that possess the capacity for emitting voice are able to communicate exclusively internal states,[193] something that does not seem to require an additional intermediary element like a mental image. The main problem is not in my opinion that "on the image reading, it [i.e. voice] is *sēmantikos* not of an object, but of the mental picture", but that this picture is meant to represent fear, pleasure or anger in visual terms, is highly unlikely; for it is important not to forget that voice denotes that the subject has had recognition of an object, but expresses its reaction towards the identified object and not the object itself, which requires a symbolization not accessible to beings without reason.[194]

I make this point to stress that there is no need to postulate an explicit predication in the lower levels of recognition,[195] but, at the same time, that Aristotle attributed some organization

[191] Some details of this task and, partially, of all merging processes are indeed problematic, since they imply a non-instantaneous process, which, in modern terms, would require short-term memory. Certainly, this operation cannot be conceived as performed in a νῦν, but Aristotle does not mention such a capacity among mnemonic abilities, because memory works upon *phantasmata* already formed. Therefore, the time span that elapses can be regarded as a case of 'specious present', which includes the time required for performing the activity. Cf. above, p. 10, n. 5.

[192] See Frede (1992: 290). Cf. also *Metaph.* Z 17, 1041b11-31 where Aristotle states that what is compounded – e.g. a syllable – is not exhausted by the sum of its components – consonants and vowels – but is "also something else" (ἀλλὰ καὶ ἕτερόν τι).

[193] See *Pol.* A 2, 1253a9-18.

[194] A very useful reading on this topic is Labarrière 1984: 34-40, where the author draws a sharp distinction between the animal σημεῖον as "une ἑρμηνεία faible, simple 'faculté d'interprétation' induisant des comportements et exprimant des sensations", and the human σύμβολον as an "ἑρμηνεία forte, 'faculté de traduction' mettant en jeu des opinions énonciatives affirmant ou niant quelque chose de quelque chose".

[195] See Frede (1992: 283; 287).

to αἰσθητική φαντασία independently from thought: only a few animals could survive relying on mere sensation of proper sensibles, while for the most part animated beings need to integrate the bulk of unrelated sensations to carry out strategies of action in the environment, even though not too far beyond a stimulus-reaction scheme.

3.2 Experience and recognition

In the psychological works, what strikes the reader is the painstaking care with which Aristotle attributes or denies faculties to some species of animals; apart from the case of thought,[196] he tries to manage these distinctions as gradual increases of the ability to interact with the environment instead of sharp separations. Still, the results are sometimes confusing because of the brief hints Aristotle has left in his works and of the difficulties in relating such capacities to each other. This is the case with 'experience' (ἐμπειρία), that is said to come about from memory in some animals besides human beings. In my opinion the 'seeing-as' interpretation provides valuable insights into some thorny aspects of Aristotle's theory of experience, in particular in its relation with memory. This aspect has been brought out by Castagnoli (2006: 143-4), who notices how the well-known claims of *Metaph.* A 1, 980a27-981b10 and *An. Post.* B 19, 99b35-100b17 are not explicitly connected, as we would expect them to be, with the treatise on memory, that instead remains an 'isolated', non-epistemological reflection. While Castagnoli (2006: 141-50) focuses his analysis on the epistemological consequences of the relation between memory and intellectual abstraction, my concern is primarily the observation of how ἐμπειρία comes to emerge from memories and conversely how it can affect our identifications of the αἰσθητά. In both passages, Aristotle describes a ladder towards knowledge, in which the higher rung always comes about and includes the lower:[197] from sensation (αἴσθησις), through retention we come to memory (μνήμη), to experience (ἐμπειρία) when memories are collated, and eventually to knowledge of the universals (σοφία or ἐπιστήμη as τέχνης ἀρχή). Scott (87-156, in particular 107-17) rightly points out that this is a severe anti-Platonic view of how abstract thought arises in human beings, since it excludes a strong form of innatism; however, Scott also argues that what

[196] Certainly, the intellect is a human prerogative, but, as it is well known, every thinking act needs bodily support to work upon, that is provided by the *phantasmata*. Again, this has been interpreted by Sorabji (1979: 50-1) as a need for imagery in each case of thinking.

[197] This is clear from the simile of the army in rout, in which the most undifferentiated element makes a stand allowing the more complex ones to consolidate their position (*An. Post.* 100a10-b5). For instance, the data coming from sensation can be confused to such an extent that the subject is not able to interrupt the flux of sensorial acquisitions; but if they are clear enough, *phantasia* can work on, organize and preserve them in a single 'image'; eventually, starting from one, or more than one, image, a subject can think or deliberate.

Aristotle describes in those passages is not "vulgar concept formation", but the achievement of the first principles of a science, in other words that succession represents a scientific methodological model (110). I will not discuss in depth this interesting standpoint,[198] but I do want to make a point about how ἐμπειρία could work in tight connection with memories even in a pre-rational way.

Again, Scott (1995: 111) upholds his interpretation noting that the other references to ἐμπειρία entail a "post-rational" capacity, which seems to exclude animals. Nussbaum too (1985: 262, n. 64) agrees that Aristotle denies animals the acquisition of experience, but on the basis of three questionable passages, in my opinion: *Eth. Nich.* H 3, 1147b4-5; H 7, 1150b28 and also *Metaph.* A 1, 980b25-7. The first two passages do not directly speak of ἐμπειρία, but only of the inability of animals to form a "judgment on the universal" (καθόλου ὑπόληψις) because their cognition relies only on *phantasia* and memory. The third passage, from the *Metaphysics*, is instead surprisingly ready to acknowledge that some animals "have but a little of connected experience" (Ross) (ἐμπειρίας δὲ μετέχει μικρόν); actually this could be considered an understatement to deny this possibility at all, as often in Aristotle, but it could very well be a serious statement.[199] However, this possible participation in experience should not entail any explicit conception of universals.

There is probably room for other kinds of synthesis, certainly pre-rational, but at the same time requiring a further capacity that *phantasia* cannot fulfil and propaedeutic for the formation of proper concepts in rational beings. So far, Aristotle has described a bottom-up process that proceeds from the extra-mental objects to the creation of synthetic elements of cognition, namely the *phantasmata*, which can be retained in us as memories. Experience instead is the moment of collation of these pieces into something unitary, which also shapes the *phantasmata* themselves. Certainly, as Nussbaum (1985: 263-4) points out in her reading of the tricky lines at *DA* Γ 11, 434a7-10,[200] only humans can weigh up their images to prefigure the consequences of their actions and they attain this result by the means of deliberative *phantasia*, which belongs to the rational sphere.

Nonetheless, if animals kept their memories totally unrelated this would imply that their recognitions happen every time just as the first time, but this is not the case, since we have seen[201] that Aristotle recognizes that some animals can be tamed and trained, and those are indeed the most similar to humans. However, animals cannot elaborate complex behavioural

[198] One possible objection is the context of the exordium of the *Metaphysics*, that seems clearly more concerned with the capacities of human beings as a species, rather than describing the scientists' methodological correctness.
[199] For a brief reconstruction of the debate on this issue, cf. Sisko (1996: 147, n. 20).
[200] By the way, this is another passage hard to reconcile with an imagistic conception of *phantasia*.
[201] Cf. above p. 12 and n. 12.

strategies, implying memories and expectations[202] connect the three temporal levels into the selection of an action. Still, I think that the internal traces of past events and objects are simultaneously mobilized in a far simpler activity that falls within ἐμπειρία, namely in recognition, that does not imply the use of intellective capacities. Describing *phantasia* I have stressed the importance of organization of the sensible data, but it is clear that past cognitions ought to play a role in this. For instance, if I have seen Coriscus many times, it will be typically easier for me to recognize him as the distant figure I see rather than for a person who has seen him only once; similarly, a domestic animal recognizes his master even if he wears different clothes. Of course, Aristotle's position is more complicated than that, since the criterion is the prominence of the trace, which can be increased through repetition, but it can result from a single strong impression that creates a vivid memory (451b14-6); however, the general outlines of the argument fit Aristotle's conception and certainly this element would explain Aristotle's insistence on the role of habituation in memory and recollection. As if our set of memory traces was a 'magnetic field', Aristotle argues that repetition, and in particular conscious repetition, tends to establish habits in our mnemonic activities and favours successive activations of the most usual results (*De Mem.* 451a12-4; 452a26-b7). The latter passage is particularly revealing: it mentions the case of a name which someone is not able to remember straightforwardly and so he misspells it, distorting the one he wants to remember under the influence of a similar one. This possibility requires a further capacity for relating our mnemonic traces that is not included in memory itself (in particular if we conceive μνῆμη as personal memory) and, surely, is not the creation of a universal as a 'scientistic' approach to the Aristotelian concept of 'experience' would require. However, Aristotle's suggestions on how to manage one's mnemonic performances mark the substantial difference between humans and animals in this process; on the one hand, human beings can wield a voluntary influence on the relationships established, on the other hand, animals probably form this sort of metamnemonic structure exclusively on the basis of the power and the number of stimuli received, which affect their successive identifications. In other words, an animal is able to recognize its master not only through the agency of a memory image, which will tie it to the contingency of the context of acquisition; sometimes it is able to recognize its master even if he wears different clothes by isolating significant features (the face, the smell etc.) in its memory images and neglecting others (clothes, hairstyle etc.): but this is a task neither of memory nor of recollection for Aristotle.

[202] The connection between μνῆμαι and ἐλπίδες is frequent in Aristotle: cf. *Eth. Nich.* I 4, 1166a24-6; K 3, 1173b18-9; *MA* 8, 702a5-7; *Metaph.* Λ 7, 1072b16-8. However, it is worth noting that neither this pair of terms nor the plural μνῆμαι alone ever occur in the *De Memoria*, which reveals that Aristotle did not conceive the coordination of the traces as a task ascribable to memory: memory images are considered separately in mnemonic processes and connected as a source of motivation to act or just as concurring to form an 'experience'.

A useful tool to elucidate how this aspect of ἐμπειρία works might be the theory of pattern recognition used in cognitive psychology.[203] In a first paradigm of this model, according to a 'feature theory' (Reed [2000: 24-9]), pattern recognition can be summarized as a process in which we focus our attention on some features and neglect others and whenever a feature, or a set of features is perceived, we classify the object regardless of the non-corresponding elements. In other word, the subject isolates 'distinctive features' through which he identifies the whole item. Plato at *Tht.* 209b-d clearly describes such a case of recognition: Socrates explains to Theaetetus that he would not remember him by retaining too general specifications of his young interlocutor; only if an imprint of his snub nose and prominent eyes together with other distinctive features of him will be inscribed in Socrates will he be able to recognize Theaetetus through the retrieval of those very traits. Evidently, the cases of pareidolia we have found in the *De Insomniis*[204] result from the distortion of the same process, because some distinctive features are mismatched with objects that cannot support them; for instance we are led to identify a face whenever we see two close spots (the 'eyes'), a vertical and a horizontal lines (the 'nose' and the 'mouth'), even if the object clearly is not a possible 'support' (e.g. a cloud). However, the same cognitive tendency allows us to recognize Coriscus as the subject of a portrait.

In conclusion, the analogy with the 'interactive activation model' applied to word recognition (Reed [2000: 39-44]) might be useful to conjecture how the entire process works, even in Aristotle's theory of perception. I shall first apply it to word-recognition to exemplify a three-level model, but the analogy does not require a symbolic object of knowledge. The first element is obviously the extra-mental object, in this case a series of lines written on a piece of paper; so they are perceived through αἴσθησις, without any elaboration. What comes to rest in us is a first identification of the primitive elements, i.e. the letters, in the form of *phantasmata*; however, we are still able to produce a further identification, collating the single letters in a single word, through the agency of ἐμπειρία. This process is not meant to be unilateral, since the subject can go along both ways: unintelligible elements are interpolated on the basis of a top-down identification suggested by the context to create a coherent pattern; a missing or illegible letter or a misspelled word may not compromise the recognition, if one selects the elements that create the pattern he expects on the basis of his previous readings. In the example I used before, an animal has raw sensible data from the perception of its master, then an

[203] In this discussion, my main source will be Reed (2000: 19-49).
[204] Cf. above, p. 86-7.

internal process isolates some features (the 'letters') and eventually recognizes its master (the 'word').

This capacity can be what Aristotle is ready to attribute to animals that are able to elaborate *some* experience (*Metaph.* A 1, 980b25-7), without excluding the possibility that experience in a strong sense is only a human prerogative. The subsequent example (*Metaph.* A 1, 981a7-12) better elucidates what Aristotle intended for experience: here he distinguishes experience from art on the grounds that the former can only recognize that a remedy has been beneficial to Callias or Socrates, observing their individual reaction to it, while art gives a rationale for that remedy, that turns to be beneficial to everybody in the same condition, i.e. explains why it works. Art is indeed the mobilization of many experiences to create a unity, which considers both the causes and the effects of an action, a judgment that an animal cannot perform. A trained animal can be taught to react in a particular way to a determinate stimulus, but it does not seem to be able to weigh up the consequences of its actions or implement them in proper behaviour.

3.3 An analysis of some crucial passages of the *De Memoria*

My reconstruction above is admittedly tentative, because Aristotle never tried to elucidate a framework that in the end turns out to be unclear to the reader; however, the interpretation I propose helps to avoid some problems of *De Memoria*, in the light of the recent challenges to the imagistic paradigm. This last section will be focused on three thorny passages of the treatise (450b11-451a2; 452a19-26; 452b19-24), which have received very different interpretations and represent the theoretical core of Aristotle's work.

– **450b11-451a2: The twofold nature of the *phantasma***

> **[1]** ἀλλ᾽ εἰ δὴ τοιοῦτόν ἐστι τὸ συμβαῖνον περὶ τὴν μνήμην, πότερον τοῦτο μνημονεύει τὸ πάθος, ἢ ἐκεῖνο ἀφ᾽ οὗ ἐγένετο; **[A-1]** εἰ μὲν γὰρ τοῦτο, τῶν ἀπόντων οὐδὲν ἂν μνημονεύοιμεν· **[B-1]** εἰ δ᾽ ἐκεῖνο, πῶς αἰσθανόμενοι τοῦτο μνημονεύομεν οὗ μὴ αἰσθανόμεθα, τὸ ἀπόν; **[A-2]** εἴ τ᾽ ἐστὶν ὅμοιον ὥσπερ τύπος ἢ γραφὴ ἐν ἡμῖν, ἡ τούτου αἴσθησις διὰ τί ἂν εἴη μνήμη ἑτέρου, ἀλλ᾽ οὐκ αὐτοῦ τούτου; ὁ γὰρ ἐνεργῶν τῇ μνήμῃ θεωρεῖ τὸ πάθος τοῦτο καὶ αἰσθάνεται τούτου. **[B-2]** πῶς οὖν τὸ μὴ παρὸν μνημονεύσει; εἴη γὰρ ἂν καὶ ὁρᾶν τὸ μὴ παρὸν καὶ ἀκούειν. ἢ ἔστιν ὡς ἐνδέχεται καὶ συμβαίνειν τοῦτο; **[B-3]** οἷον γὰρ τὸ ἐν πίνακι γεγραμμένον ζῷον καὶ ζῷόν

ἐστι καὶ εἰκών, καὶ τὸ αὐτὸ καὶ ἓν τοῦτ᾽ ἐστὶν ἄμφω, τὸ μέντοι εἶναι οὐ ταὐτὸν ἀμφοῖν, καὶ ἔστι θεωρεῖν καὶ ὡς ζῷον καὶ ὡς εἰκόνα, οὕτω καὶ τὸ ἐν ἡμῖν φάντασμα δεῖ ὑπολαβεῖν καὶ αὐτό τι καθ᾽ αὑτὸ εἶναι καὶ ἄλλου [φάντασμα]. ᾗ μὲν οὖν καθ᾽ αὑτό, θεώρημα ἢ φάντασμά ἐστιν, ᾗ δ᾽ ἄλλου, οἷον εἰκὼν καὶ μνημόνευμα. ὥστε καὶ ὅταν ἐνεργῇ ἡ κίνησις αὐτοῦ, ἂν μὲν ᾗ καθ᾽ αὐτό ἐστι, ταύτῃ αἰσθάνηται ἡ ψυχὴ αὐτοῦ, οἷον νόημά τι ἢ φάντασμα φαίνεται ἐπελθεῖν· ἂν δ᾽ ᾗ ἄλλου καὶ ὥσπερ ἐν τῇ γραφῇ ὡς εἰκόνα θεωρεῖ καί, μὴ ἑωρακὼς τὸν Κορίσκον, ὡς Κορίσκου, ἐνταῦθά τε ἄλλο τὸ πάθος τῆς θεωρίας ταύτης καὶ ὅταν ὡς ζῷον γεγραμμένον θεωρῇ, ἔν τε τῇ ψυχῇ τὸ μὲν γίγνεται ὥσπερ νόημα μόνον, τὸ δ᾽ ὡς ἐκεῖ ὅτι εἰκών, μνημόνευμα.[205]

In this passage, Aristotle presents an aporia his theory of memory (and any representational theory of memory) has to face, and its solution. This is not a completely original formulation, because Plato at *Tht.* 163d-164b and 166b-c uses a lexicon which Aristotle certainly knew and somehow reproduced here. At *Tht.* 163d-164b, Socrates poses an objection against Protagoras' thesis that perception is knowledge considering that memory is related to a past perception or experience. Protagoras is envisaged by Socrates to defend himself from this 'sophism' by saying that the object of my present memory is different from the object of my past experience: thus, the solution involves the negation of the representational nature of mnemonic processes, since the flux of becoming has necessarily changed both the subject and the object of memory in the meanwhile. The person who performs an act of memory is not the same subject who experienced the original perception and if the object originally was an extra-mental entity, now it is some kind of unspecified present mental image.

[205] "But then, if this is the sort of thing that happens with memory, does one remember this affection, or the thing from which it was produced? For if the former, we would remember nothing absent; but if the latter, how is it that while perceiving the affection we remember the absent thing which we are not perceiving? And if it is like an imprint or drawing in us, why should the perception of this be the memory of a different thing, rather than of the affection itself? For one who is exercizing his memory contemplates this affection and perceives this. How therefore will he remember what is not present? For at that rate one could also see and hear what is not present. Or is there a way in which this is possible and happens? For the figure drawn on a panel is both a figure and a copy, and while being one and the same, it is both, even though the being of the two is not the same. And one can contemplate it both as a figure and as a copy. In the same way one must also conceive the image in us to be something in its own right and to be of another thing. In so far, then, as it is something in its own right, it is an object of contemplation or an image. But in so far as it is of another thing, it is a sort of copy and a reminder. So again when the change connected with the other thing is active, if the soul perceives the image as something in its own right, it appears to come to one as a thought or image. But if one contemplates the image as being of another thing, and (just as in the case of drawing) as a copy, and as of Coriscus, when one hasn't seen Coriscus, then (not only in the case of the drawing is the experience of so contemplating it different from when one contemplates it as a drawn figure; but also) in the case of the soul, the one image occurs simply as a thought, the other, because it is a copy (as in the case of drawing), is a reminder" (Sorabji).

From [1] to [B-2] Aristotle emphatically highlights this problem with a tour de force of rhetorical questions, which outlines the problems of the two possible solutions, while in [B-3] Aristotle puts forward the representational nature of the *phantasma* as his way out of the dilemma. In [1] the question is already defined, since, if memory is to be conceived as essentially related to the *phantasma*, it is confined to two different modalities of representation that I shall call [A] and [B]. The only two operations possible on the *phantasma* are seeing it as the pattern it is meant to represent (i.e. 'Coriscus') or as something denoting its extra-mental original that caused the imprint (i.e. 'Coriscus as I have seen him in the *agora* yesterday'). The same physical trace can support two different psychophysical operations: thus, the scheme is threefold; Aristotle will focus his attention on the "*modus spectandi*, that is, the way that we view the image" derived from the trace (Bloch [2007: 70]), trace that however preserves its own ontological autonomy.

[A-1] and [B-1] suggests that there is no straightforward answer to the impasse and both clauses imply some difficulties. What emerges is that whichever the solution may be, it has to explain the nexus between the contemplation of the trace and its absent cause, τὸ ἀπόν, that any mnemonic act entails. In that respect, if [A] completely fails to address the problem, because considering the trace in its informative content says nothing about its cause, only option [B] stands, even if it remains unexplained.

Furthermore, a second approach to the question in [A-2] and [B-2] reveals a second requisite for the mnemonic activity, namely that there are not additional physical entities that intervene in a memory act and that the modality of representation of the trace as a *mnēmoneuma* must work upon the same πάθος as the normal perception of it does. Thus, the dilemma is yet to be solved, in fact the difficulty concerning [B] is even worsened by the restriction on the same support of the *phantasma*.

[B-3] instead presents the solution, in the form of an analogy with drawing. A picture is both the representation of something, e.g. an animal, and a likeness of the extra-mental objects from which it has been drawn; likewise, the *phantasma* is like a picture: it can represent the result of the original identification, but can also denote the aetiological process of acquisition. This statement requires some explanation.

Translating the terms ζῷον and εἰκών as "figure" and "copy" is an established habit that translators, starting from Beare, have adopted, but which has been justly criticized. Apart from the strain on the Greek,[206] this interpretation raises patent difficulties, since it considers the

[206] Actually, Bloch (2007: 33, n. 16), who follows the traditional translation, quotes interesting occurrences that have been interpreted in the same way, but then remarks that translating ζῷον as 'animal' "is not impossible".

phantasma as a self-referential object, while it essentially has an intentional nature. In other words, to say that considering our inner presentation in itself means recognizing it as a 'mental' image[207] is equivalent to say that sight is essentially seeing the 'image' impressed on our retinas and not the external stimulus that caused it. Furthermore, the opposition between the "animal-in-the-picture" and the "copy" is not the one assumed by Sorabji (2006: 84). Sorabji argues that the animal "may be ten feet tall, and stalking its prey" and the copy "may be two inches from top to bottom, and [...] cannot be said to be stalking its prey". Wedin (1988: 139-40) presents a different alternative criticizing the traditional interpretation, which is a better position to come to the different reading I hold. Wedin says that "pictures are intrinsically dog, cat or triangle pictures", but, if regarded as a picture of something else (ᾗ ἄλλου) they represent "some *particular* dog, cat, or triangle". This demonstrates how the difference presented in this passage need not be about two different objects, but about how it is possible that the same physical trace can support two different visual angles: both the animal-in-the-picture and the copy are related in different ways to the same object and neither considered here as the physical imprint retained in us. Indeed, Wedin's suggestion accounts very well for the interest Aristotle shows here for the objects of thought, since he considers the activation 'in itself' (καθ᾽αὐτὸ) of the trace like the presentation of νόημά τι ἢ φάντασμα, which is not conceivable in Sorabji's interpretation.

However, Wedin's interpretation does not address the very problem Aristotle tries to tackle in this passage, that is not only how it is possible that the same 'image' could bear two different cognitive contents, but rather how it is possible that one of those could represent something absent. The difference drawn by Wedin is concerned with 'images' referring to general as opposed to particular objects of knowledge, e.g. regarding an image as image of a man or as image of Coriscus *qua* individual; but in this case, temporal depth is simply excluded from the model. Equally important, Wedin's suggestion is also incompatible with the attribution of *phantasia* to some animals, which are in any case unable to regard an 'image' as pertaining to a general class of items like 'man', operation that requires the intervention of the *nous*. A last problematic point of his interpretation is the odd consequence that we cannot have experience of a *phantasma* about Coriscus, but only a *mnēmoneuma* of him, i.e. we cannot think of Coriscus, if not in the particular context of a former experience, fact that is a clear hindrance to the formation of abstract thought starting from particular objects.

[207] Admittedly, this interpretation fits very well with the emotional detachment from the image described in *DA* Γ 3, 427b23-4. However, this remark belongs to the analogy with image-producing as φαντασία κατὰ μεταφοράν: cf. above, p. 85-6. In fact, the "non-paradigmatic sensory experiences" ascribed to *phantasia* do not imply such awareness.

The solution, instead, seems to be that Aristotle intended the difference as the difference between regarding the *phantasma* of Coriscus in itself, either as a man or as Coriscus *qua* the particular person I know, and observing it as the copy of something else, e.g. Coriscus as I met him in some past occasion, i.e. with an additional awareness that the image I am having of him is related to some particular past experiences.[208] My answer still explains why Aristotle says at 450b29 that the soul can examine the 'image' καθ᾽ αὐτὸ as νόημά τι ἢ φάντασμα. He is not concerned here with these modalities of activation, which are two subspecies of regarding the *phantasma* as an 'object of contemplation' (θεώρημα), but Aristotle is focusing his attention on the upper distinction between regarding the *phantasma* as a θεώρημα or as an εἰκών.

On the other hand, my account addresses equally well the issue that the *phantasma* is about something absent, that was Aristotle's puzzle about the *mnēmoneuma*. In other words, the trace stores the extra-mental object as it has been recognized and not the (possibly blurred) perceptual context. In this sense, Wedin's stress on the inclination of *phantasia* toward general patterns should be accepted, since the 'image' in itself represents the object, disregarding the context of acquisition: for instance, the 'image' drawn by an erroneous identification of Coriscus can be used as the substratum of intellectual operations as well as one derived by a correct recognition. Conversely, using the same trace as a *mnēmoneuma* is the restoration of the nexus between the time-related perceptual context and the original identification; for considering the temporal depth of an event brings the subject back to the very moment of the original recognition: even with an undetermined awareness of this moment we know that the memory trace has been generated in a particular time that we do not happen to know now.

In a slightly different vein, this is the solution suggested by Caston (1998), despite his claim that the intentional nature of the *phantasma* had been already noticed by Wedin (1988: 139-40) without specifying the important differences between the two models. Regarding the *phantasma* as a copy entails the further awareness that "this representation somehow *derives from* or is *causally linked* to the object it represents" (Caston [1998: 282, n. 80]). For this reason, he cleverly interprets the word ἄλλου ("of another thing") at line 450b25, which Aristotle uses to describe the activation of the trace implied in memory, as a genitive of source.

[208] This naturally fits Annas' (1992) interpretation, as she conceives memory as similar to our idea of 'personal memory', and indeed, this is accepted by Caston (1998: 258, n. 18) in a cursory footnote; but the overlap is not complete in my opinion. Time depth is certainly a basic element of this form of memory, but not necessarily in a determined way as a past encounter with the object. For instance, we can remember that Coriscus often wears a particular cloak, but it is clear that we need not to remember each time he wore it: it is sufficient to remember that this is something that occurred more than once in my past experience.

Additional support for my account is provided by the analogy of the 'image' as ζωγράφημά τι at lines 450a29-30.[209] A ζωγράφος is a painter who "draws from life or from nature" (LSJ [1996: 759]) and therefore the emphasis is on the relationship between the painter and the object he is depicting. The same use can be found in Plato's *Cratylus*. Here, nouns and paintings are equated as "imitations of things" (μιμήματα εἶναι πραγμάτων τινῶν: 430b). But later on (432b-c), Plato explains the nature of this imitation. An εἰκών is not, obviously, the reproduction of all the qualities of the object it imitates, otherwise "would there be two things, Cratylus and the image (εἰκών) of Cratylus", or rather "two Cratyluses?" (Fowler). Thus, the dichotomy πρᾶγμα/εἰκών we have found at 450b20-7 is already present in Plato; there are two items, i.e. the object and its imitation, but the latter in its own nature points at the object through some key features, in other words it is more than colors on a canvas, or lines on a tablet. In addition, Plato's awareness that the image selects but a few qualities of the object might be an important antecedent for Aristotle's claim. The *phantasma* is usually handled without this awareness and only when one recognizes it as a selection of features, we grasp that what persistes in our organs is not a second Coriscus, but that the imprint represents a previous recognition of him, while we think of or imagine Coriscus we completely disregard the nature of the inner presentation and consider the extra-mental object it denotes.

– **452b17-24: 'Movements of the object' and 'movements of time'**

Although at 450b11-451a8 Aristotle explains that the *phantasma* can be subject to different *modi spectandi*, he does not seem to clarify how the two mechanisms of activation differ from each other, apart from the addition of the awareness of the time depth in memory. In my opinion, 452b17-24 can be seen as a graphic representation of this difference. The interpretation of this passage is much debated and commentators agree that it will be very difficult to reach a definitive clarification: Aristotle very likely used exemplificative sketches, which are lost, to supplement his explanation. Thus, every interpretation has to deal with a text that is almost intelligible and consequently mine too will remain tentative.[210]

> ὥσπερ οὖν εἰ τὴν Α Β Β Ε κινεῖται, ποιεῖ τὴν Γ Δ· ἀνάλογον γὰρ ἡ Α Γ καὶ ἡ Γ Δ. τί οὖν μᾶλλον τὴν Γ Δ ἢ τὴν Ζ Η ποιεῖ; ἢ ὡς ἡ Α Γ πρὸς τὴν Α Β ἔχει, οὕτως ἡ Θ πρὸς τὴν Ι ἔχει; ταύτας οὖν ἅμα κινεῖται. ἂν δὲ τὴν Ζ

[209] Caston (1998: 259) is the only one who stresses that the presence of τι mitigates the cogency of the analogy.
[210] The discussion at 452a19-26 faces the same problems, with the further inconvenience of much more uncertainty in the manuscripts.

Η βούληται νοῆσαι, τὴν μὲν Β Ε ὁμοίως νοεῖ, ἀντὶ δὲ τῶν Θ Ι τὰς Κ Λ νοεῖ· αὗται γὰρ ἔχουσιν ὡς Ζ Α πρὸς Β Α. ὅταν οὖν ἅμα ἥ τε τοῦ πράγματος γίγνηται κίνησις καὶ ἡ τοῦ χρόνου, τότε τῇ μνήμῃ ἐνεργεῖ (452b17-24).[211]

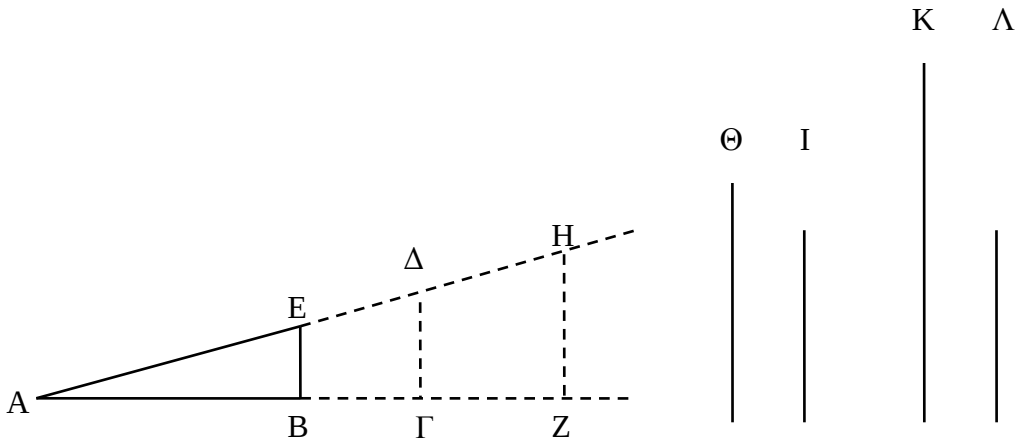
In the passage that precedes this one (452b7-17), Aristotle urges the need for understanding how time-lapses, either determinate or indeterminate, are estimated. He argues that as we distinguish magnitudes, our cognition of time is based on proportional changes in us (τῇ ἀνάλογον κινήσει) that reproduce the shapes and the changes (τὰ ὅμοια σχήματα καὶ κινήσεις) of the outer world. Still, this does not explain why our knowledge of the inner changes should lead to the retrieval of the outer ones. But:

ἔστι δ᾽ ἴσως ὥσπερ καὶ τοῖς εἴδεσιν ἀνάλογον λαβεῖν ἄλλο ἐν αὑτῷ, οὕτως καὶ τοῖς ἀποστήμασιν (452b15-7).

Perhaps just as one can receive in oneself something distinct but in proportion to the forms, so also in the case of distances (Sorabji).

What obviously creates difficulties in understanding this passage is Aristotle's use of the generic terms εἶδος and ἀπόστημα, the second of which can have both spatial and temporal application. In addition, even if we accept the temporal interpretation as it seems to be suggested by the context, whereas the idea of ἀποστήματα as referred to time-lapses is quite plain, how should one conceive a temporal εἶδος? Therefore, there is strong disagreement on how to interpret the elements indicated by the letters of the example in exam, but the graphic reconstruction has remained substantially unchanged since its first formulation by Beare.

[211] "It is then, as though, if a person undergoes the change AB, BE, he constructs ΓΔ. For the changes ΑΓ and ΓΔ are in proportion. Why, then, does he construct ΓΔ rather than ZH? Is it that as ΑΓ is to AB, so is Θ to I? So one undergoes these latter changes simultaneously. But if someone wishes to think of ZH, he thinks in the same way of BE, but instead of the changes Θ, I, he thinks of the changes K, Λ. For these latter are related as is ZA to BA. Whenever, then, the change connected with the thing and that connected with the time occur together, then one is exercizing memory" (Sorabji).



Sisko (1997: 171-3), before spelling out his own interpretation, briefly summarises his predecessors' attempts. The most interesting ones are by far the accounts given by Ross (1955: 249-52) and Sorabji (2006: 18-21; 108-10), who associated the example with the estimation of time-lapses. For both of them, the major cathetus of the triangle (AB) represents the time-lapse that extends from the moment of the present activation of a memory to the time of the event remembered. This conception is very plausible given the idea of ἀπόστημα. The difference between the two interpretations lies instead in the εἶδος, which is a very puzzling concept to implement in a temporal model. Ross suggested that the minor catheti (BE, ΓΔ,...) represent the duration of the events in questions, while for Sorabji they stand for the relationship between two different events, which we are able to date relatively to each other. A very good argument he uses against Ross is that for many occurrences one does not need to establish the duration of an event, for instance when he remembers a fact or a person (Sorabji [2006: 19]). Interestingly, Sorabji also admits that the introduction of a second time period in the diagram is somewhat unexpected, "for surely we only need to know about one, the time-lapse since the remembered event" (*ibid.*).

This is a good starting-point for approaching Sisko's (1997) account, for he criticizes Sorabji's solution on the basis of the fact that Aristotle showed no interest in estimating relative time-lapses between *two* events, but simpler occurrences of remembering, e.g. that one has previously experienced something or that he has done something some time before, which do not require any reference to other time periods (172-3). Starting from this consideration, Sisko believes that the model proposed is simply too complicated to illustrate time-spans in memory, while it suits our cognition of magnitudes, which requires a similar scheme. On the catheti Sisko puts lengths of and distances from the objects so as to allow the grasp of perspective. In an example he gives in his article, Sisko (1997: 170) states that very similar changes affect the

first sensorium in the case of a 10 ft. rod seen at the distance of 20 yards and of a 20 ft. rod seen at a distance of 40 yards, which one has seen some time before. Therefore the ratios applied to the image determine the event remembered: whenever the ratio Θ:I is applied to the inner image, one will remember the 10 ft. rod, when instead K:Λ, then the 20 ft. one. The same process is applied to time-spans, without the complication of the double signature retained in the trace, both of the event and of the time.

This interpretation is very interesting, but presents some difficulties as well as the others. Firstly, it is true that Aristotle here ambiguously hints at some intellectual involvement in the grasp of magnitudes (νοεῖ: 452b9 and 452b13; νοήσει: 452b11; νοῇ: 452b13), but the bodily marks are still acquired through the αἰσθητικὴ φαντασία and the calculation of the relations between distances and magnitudes is not entrusted to *phantasia*. One example is *DA* Γ 3, 428b3-4, where Aristotle states that the sun appears to be a foot across and only the intervention of an intellective capacity allows us to believe it as bigger than the earth. Secondly, the context of the passage strongly suggests that Aristotle introduced the example to present a temporal model, which is analogous to the process of grasping magnitudes, but it is here particularly important, because the awareness of time depth is what distinguishes the mnemonic activation from the one occurring in the normal exercise of *phantasia*. Sisko (1997: 174) argues that the grasp of magnitudes requires a more complicated model than the grasp of time-spans, but even supposing that this is the case for the sake the argument, he does not consider that time-relations are not graspable without the objects they accompany. This aspect has been pointed out by Taormina (2002: 59), who says that "la perception du temps présuppose les images, elle intervient alors sur celles-ci et en signale la différence". So it is more likely that Aristotle wanted to elucidate the role of this kind of perception in memory and how the correct combination of the movements produces a proper mnemonic occurrence.

In fact, a further criticism that undermines all the interpretations I have presented so far is that none of them explains how the two movements[212] could possibly work together in an episode of memory; for Aristotle says immediately after the example that "whenever, then (οὖν), the change connected with the thing and that connected with the time occur together, then one is exercising memory" (Sorabji). However, this consequentiality is unexpected, if the preceding example is to be taken to explain only one of the two movements: the sheer fact that

[212] Cf. above, pp. 37-9. With 'movement' Aristotle means the process of generation of the trace, but also the 'metadata' the trace has in itself. Every trace, to be recollected, must have something, that we can conceive as a 'label' or a 'signature' related to its content and something related to the time of its generation; these 'signatures' allow the subject to connect one trace to another in a recollective chain.

they work in the same way does not imply that they are both required in memory, or that they cooperate.

Therefore, I will try to interpret 452b17-24 as the junction between the analogy of their *modi operandi* and the conclusion that whenever they occur at the same time, one has an episode of memory. The train of the argument, in my opinion, is the following: (i) both the movements retain their objects through proportional changes in the body, which are smaller than the ones they reproduce from the outer world (452b7-17); (ii) furthermore, they happen to work jointly in memory (452b17-22); (iii) in fact, each episode of memory seems to require such movements (452b23-4); (iv) for whenever they do not occur simultaneously, one has only the illusion of having recalled something (452b24-9). In this way, the first three statements constitute a single argument, in which the premise (i) establishes the compatibility of the two movements, the example (ii) shows how they actually work in a single framework, which represents the very essence of memory (iii); the argument (iv) is an indirect confirmation from empirical failures that the two movements must occur simultaneously.

The advantage of this reading is that in this way the diagram drawn on the basis of the 452b17-22 example becomes meaningful in all its parts and addresses a fundamental problem of mnemonic activation; in addition, it saves the reader the trouble of contriving an "irrelevantly complicated" model, element that Sisko (1997: 174) admits to be a difficulty to his proposal.

So the classic reconstruction of the diagram, which I endorse, comes to represent a complete operation of memory activation. To exemplify my interpretation, I give a *legenda* of the objects of the diagram shown at page 98.

A = actual perceptual state; AE = *phantasma*; AB = movement of the time in the *mnēmoneuma*;BE = movement of the object in the *mnēmoneuma*; B = perceptual state of having a *mnēmoneuma*; ABE = *mnēmoneuma*; AΔ = *aistēma*[1]; AΓ = movement of the time in the *aistēma*[1]; ΓΔ = movement of the object in the *aistēma*[1]; Γ = perceptual state of having *aistēma*[1]; AΓΔ = event[1]; AH = *aisthēma*[2]; AZ = movement of the time in the *aisthēma*[2]; ZH = movement of the object in the *aisthēma*[2]; Z = perceptual state of having *aisthēma*[2]; AZH = event[2].

So the hypotenuses represent our cognitive experiences, on the minor catheti the movements of the objects and on the major catheti the movements of time. The starting point is, therefore, that a subject who is having the *phantasma* AE (e.g. about Coriscus) in the moment A can restore the two movements to retrieve the original moment B, in which the *phantasma* originated: thus, the triangle ABE represents the *mnēmoneuma*. But the *mnēmoneuma*, as we

have already noticed, is essentially representative of some elements one has previously perceived. For that reason, the result of a mnemonic activation is the construction of the original movement of the object ΓΔ, which previously impressed the *aisthēma* ΑΔ in the moment Γ. This does not happen at haphazard, but in virtue of the proportionality between the inner movements and their counterparts in the original perceptions. Indirectly, also the movements of time and the ones of the objects are interrelated, in the sense that, to have in the present moment the same movement of the object (BE) from different original perceptions, the more distant in the past is the event, the stronger the original affection has had to be to persist in its actual strength.[213]

One important point is that Aristotle is concerned with the minor catheti, since the simultaneous activation of AB and BE produces ΓΔ, which in my account is the original movement of the object. This is very plausible in Aristotle's conception of memory, for a mnemonic 'image' basically represents a *pragma*, of which we have the additional awareness of temporal depth (προσαισθάνεται ὅτι πρότερον: 450a21). This element distinguishes Taormina's (2002: 54-5) conception of perception of time. Like Kahn (1979: 8, n. 23), she recognizes that the absence of time from the list of common sensibles must have some importance in Aristotle's thought; in her opinion, discrimination of time-spans operates on the basis of the movements of the soul and the temporal dimension, which distinguishes the 'before' and the 'after', and orders the retrieved data in a structured succession.

This reflection somehow undermines the independence from magnitudes in grasping time spans, implicitly defended by Ross (1955: 249-52) and Sorabji (2006: 18-21; 108-10) in their models, but with significant differences between the two interpretations; for while the former adopts the implausible idea that the restoration of both movements construes the duration of an event in the past, the latter related the minor catheti of the diagram with the relations between two past events, suggesting that anyway time-discriminations are tied with the acquisition of events.

Coming back to the text, there is a further problem which Aristotle raises that concerns proportionality. It is not sufficient to recognize that the inner movements are merely analogous to the ones outside, but we have to assume that they bear a particular proportion, through which one can activate the proper movement of the object. In fact, starting from the same inner movements the application of different ratios entails different results and therefore events from the past supported by the same *phantasma*. The ratios Θ:I and K:Λ, which correspond to

[213] The same argument is used by Sisko (1997: 170) to justify his interpretation of the diagram as representing spatial dimensions. In his account, the more distant is the rod we remember, the bigger its actual length has to be because of perspective.

AΓ:AB and AZ:AB respectively, might be considered as metadata attached to the image, which mark the content as related to a certain time. So, in the last part of the example, Aristotle shifts his interest from the minor to the major catheti of the triangle, i.e. from the movements of the objects to the ones of time, and addresses the nature of temporal depth. The subject who starts remembering from the point A of the diagram, projects and places an event in the past thanks to a temporal awareness, which releases the *phantasma* from its immediate representative content; however the momentum which spans from B to E can represent several past encounters with the same object. Thus, Aristotle introduces the ratios to reduce the multiplicity of the possible acts of remembering to the discrimination of each case on the basis of the particular proportion applied to the movement of the time.

This can be better understood in the light of the claim that the movement of time can be either determinate or indeterminate, which concludes this section (452b29-453a4). This remark could seem odd, since Aristotle has just said that one remembers a past encounter whenever he applies the correct ratio; however, as he points out at 452b23-4, activating a *mnēmoneuma* only means to restore the inner movements. This is sufficient to project the movement of an object from the past, which can remain temporally undetermined and nevertheless one can consider it as deriving from the past. When instead, the ratio is examined in itself by the subject, he is able to retrieve the exact moment of the encounter: for instance, in one sense one can remember Coriscus without being aware of the exact moment he saw him, in the other that he met him three days ago in the *agora*.

Certainly Aristotle drew this distinction also to keep attributing memory to animals, which, however, cannot measure time in a determinate way.[214] In that respect, what animals can do is only to recognize that the movement of time created by the projection (AΓ or AZ) is longer than the one that represents their present experience (AB); therefore they are aware in some way of temporal depths, since they can perceive that this additional movement goes beyond their actual sensorial acquisition and, then, that the *phantasma* points at some past occurrence.

Needless to say, the interpretation I have put forward is not free from weaknesses and defects, a few of which I wish to illustrate here briefly. Firstly, as I have already noted, the massive use of a terminology related to intellectual activities throughout the passage is really puzzling: even for the grasp of magnitudes Aristotle uses the verb νοεῖν. Actually, this element represents a thorny problem for each interpretation considered. The only commentator who seems to suggest a different approach is Bloch (2007), who takes the lines 452b24-453a4 to

[214] On the issue about the relation between time and soul see Coope (2005: 159-72).

refer to the intellectual operation of 'recalling'.[215] But, unfortunately, he does not spell out a thorough interpretation of the preceding passage; on the contrary he puts the whole 452b17-22 example amid cruces in the text and declares that he does not hold a definite position on it, since it is doubtful whether the passage may be explained once and for all (101). In addition, at 452b24-453a4 Aristotle seems concerned with both the modalities of the activation of the trace, both remembering – the corresponding verb is used three times – and 'recalling'.

One other criticism against my interpretation might be that Aristotle hints at two different elements for each phenomenon. At 452b12-3 magnitudes are acquired through a proportional movement, which inscribes in us "similar shapes and changes" (τὰ ὅμοια σχήματα καὶ κινήσεις) of the objects from the outer world; later on, at 452b15-7 again Aristotle argues that, like the εἴδη, also the ἀποστήματα must be proportional to the outer movements. In the first case, I argue that the two elements can be conflated in the same movement of the object, which as a source of the *phantasma* retains the object in itself (as a σχῆμα) and at the same time is the result of a temporally related κίνησις; in the second passage, I take εἶδος as referring to magnitudes and ἀπόστημα to time-spans, which is a plausible solution, even though rather implicit in the text.

– **452a19-26: Mnemotechnique or physiology of memory?**

After Sorabji's (2006: 35-46; 104-5) detailed account, few other things, if any, can be added on this passage. His textual reconstruction, based upon clashing variant readings from the extant manuscripts, seems the most fruitful and provides a clear idea about the progress of the argument:

> οἷον εἴ τις νοήσειεν ἐφ᾽ ὧν Α Β Γ Δ Ε Ζ Η Θ· εἰ γὰρ μὴ ἐπὶ τοῦ Θ μέμνηται, ἐπὶ τοῦ Ζ μνησθήσεται· ἐντεῦθεν γὰρ ἐπ᾽ ἄμφω κινηθῆναι ἐνδέχεται, καὶ ἐπὶ τὸ Η καὶ ἐπὶ τὸ Ε. εἰ δὲ μὴ τούτων τι ἐζήτει, ἐπὶ τὸ Γ ἐλθὼν μνησθήσεται, εἰ τὸ Δ ἢ τὸ Β ἐπιζητεῖ, εἰ δὲ μή, ἐπὶ τὸ Α· καὶ οὕτως ἀεί. τοῦ δ᾽ ἀπὸ τοῦ αὐτοῦ ἐνίοτε μὲν μνησθῆναι, ἐνίοτε δὲ μή, αἴτιον ὅτι ἐπὶ πλείω ἐνδέχεται κινηθῆναι ἀπὸ τῆς αὐτῆς ἀρχῆς, οἷον ἀπὸ τοῦ Γ ἐπὶ τὸ Β ἢ τὸ Δ.[216]

[215] Cf. above, pp. 18-29.

[216] "As for example if someone were to think of the things denoted by A B Γ Δ E Z H Θ. For if he has not remembered at Θ, he will remember at Z for from here he can move either direction to H or to E. But if he was not seeking one of these, after going to Γ he will remember, if he is searching for Δ or B, or if he is not, he will remember after going to A. The reason why one sometimes remembers and sometimes does not, starting from the

Although I follow this textual reconstruction, I believe that this does not automatically lead to Sorabji's conclusions, namely that Aristotle is here describing a mnemonic technique. This, as I argue above,[217] turns out to be unnecessary to reconstruct Aristotle's arguments. This passage, in my opinion, explains how correct recollective searches work on the whole and not in the particular case of the application of the place-system technique. Perhaps a kinship with these artificial mnemonic strategies of retrieval can be recognized, but the perspective should be inverted: at most the 'places' are established by mnemonists exploiting and developing physiological structures, which, once recognized and studied, can be used for a voluntary control of the process: this will justify the prescriptive attitude of 452a12, in which Aristotle suggests to choose a starting-point to enhance recollections.

Aristotle introduces this graphic example to explain why middle-points are good starting-points, after having noticed that sometimes recollective chains do not seem to present an explicit link between the items connected. Aristotle's explanation for this is the multidirectional orientation of the research: starting from the same item, one can move to a habitual object that is clearly related to the former, or skip some elements to retrieve something which bears just a faint association. For instance, in the chain 'milk'-'white'-'air'-'fluid'-'autumn' (452a13-6) he who is recollecting does not visit the habitual places of each point, but directly moves to a different ganglion, from which again several possibilities depart: in the case of 'air', the habitual movement will be towards the other elements that constitutes the sublunary world, i.e. 'fire', 'earth' and 'water', but he can also move to 'fluid'. Sorabji (2006: 104-5) has to admit that this example does not really seem an authentic case of the system of *loci*, since with this system "one can memorize in a given order a set of items that have no memorable relationship of their own", while the five items used by Aristotle "do have a relationship of their own". Therefore, the quickness and the familiarity of connections of some anamnestic chains are explained by Aristotle with a specific model that stresses the usefulness of having a starting-point, which for him clarifies "the reason why those who have got one [i.e. starting-point] are thought (wrongly) to be using the place-system". This possible way of reading the phrase τὸ δ' αἴτιον at 452a13 should alert a commentator who wants to read the passage as an example of place-system.

A second level of criticism is that place-system methods of memorization include many structures and not only the iteration of triplets, whose starting-points function as junction

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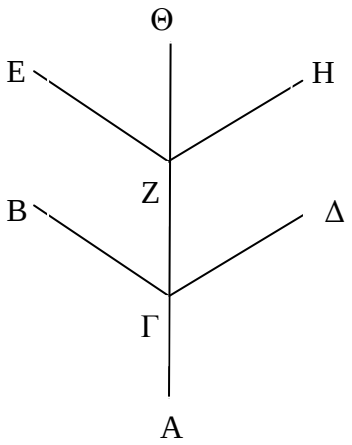
same position, is that it is possible to move to more than one point from the same starting-point, e.g. from Γ to Z or Δ" (Sorabji).

[217] Cf. above, pp. 79-83.

between many connections. Neither the well-known example of the rooms of a house associated with the items one wants to recollect, nor the technique used by Simonides to remember the guests who died under the fallen roof at Scopas' banquet, that is the semi-mythical prototype of the place-system, necessarily entail such a disposition of the items, which instead typifies Aristotle's model. In these models the number of items per each batch is not specified.

Thus, the kind of place-system introduced here must be confined to the particular case of the buildings overlooking a street,[218] which is not equivalent to the example of the rooms of a house made by Quintilian, as Sorabji seems to assume. Actually, a graphic illustration of Sorabji's reconstruction[219] reflects very well the compatibilities between Aristotle's text and this kind of place-system. It can be represented as follows:



However, a difficulty has been already raised by Sorabji (2006: 33-4) himself whether it is possible "to skip over members of a series, and land precisely in the middle of a batch". Thus, the middle-point must have the further capacity of leading the person who is recollecting to the middle-point of the next triplet; but in order to do so, Sorabji has to postulate "the incorporation of a symbol within the middle image of each batch of three". This is arguably a complication that forces us to read something that is not in the text. To clarify the problem, this difficulty can be applied to the example of a mnemonist who is recollecting starting from the visualization of a street and of the overlooking buildings. The street serves as connection between the items, but it is not significant in itself and is not related to something to be remembered; it is only the backbone of the image superimposed on the items, which connects

[218] Sorabji (2006: 23) mentions the case described by Luria of the mnemonist Shereshevskii, who applied the place-system to Gorky Street in Moscow.
[219] A very similar one has been found in a medieval manuscript: see Bloch (2007: 239).

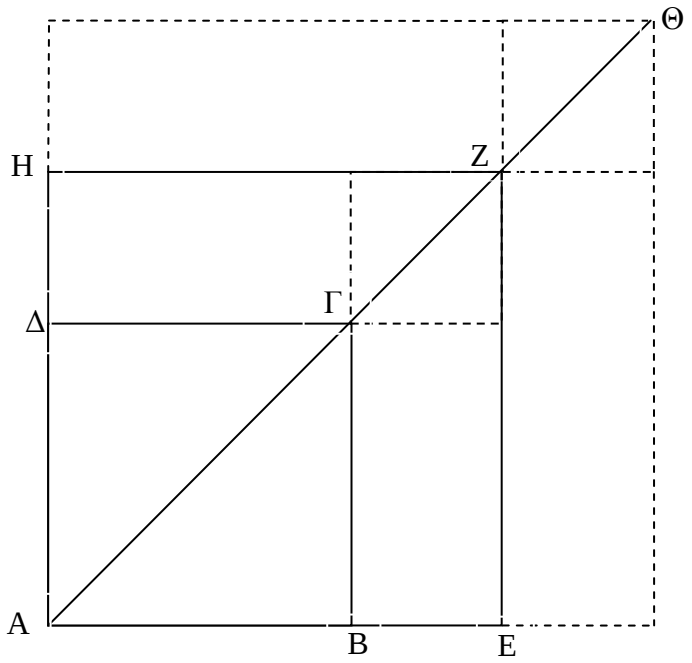
them in a unity. In that respect, this one too is not a fitting analogy, since it is not based on the iteration of triplets, as Aristotle's system is.

There are ultimately many reasons to suggest a different interpretation of the passage, which should start in my opinion from considering whether this example might fit Aristotle's theory of recollection as a psychophysical capacity shared by all human beings, instead of the narrow context of mnemotechniques. For this purpose, I shall take into serious account Aristotle's point that recollective searches are a sort of reasoning akin to deliberation, and which take place in something bodily (453a6-16). Our passage can be considered in my opinion an explanation of how good anamnestic chains can successfully retrieve items by plotting a grid on the physical trace to organize its content. So the rational activity upon the trace will be the recognition in it of meaningful connections between the items and the traces, a reconstruction that allows the subject to orient himself within the information stored and thus to direct his efforts toward the more plausible alternative, gradually excluding portions of the field of traces which after the analysis have not led him to the goal.

Starting from this framework several graphic reconstructions of the argument can be drawn, but I think the most promising is the application of the gnomonic measurement on the trace. The definition of gnomon has been given by Euclid (*Elem.* II, def. 2): "in any parallelogrammic area let any one whatever of the parallelograms about its diameter with the two complements be called a gnomon" (Heath). This measurement consists in dividing the original figure in as many modular figures construed on its diagonal as it can undergo with the method of reiterated subtraction. In a forthcoming article, Cattanei (2009) shows the importance of this method, known as 'Euclidean algorithm', much used in ancient geometry,[220] in deliberative contexts, also outside philosophical discussions. For instance, she mentions a passage from Thucydides (I, 138, 3), in which the historian compares Themistocles' quickness in deliberating to the gnomon.

This could be an interesting solution for the passage examined and a graphic reconstruction could help to spell out this model.

[220] For a detailed discussion see Fowler (1999).



This model is graphically similar to Sorabji's, since the outlines of a possible reconstruction are limited by the text, but the application of gnomonic measurement to the example gives a different standpoint to interpret the passage in the light of Aristotle's theory of recollection as a whole. The recollective process begins with setting a search-directrix, which is the diagonal from A to Θ: if this point is not the one the subject was looking for, this directrix will serve as a 'middle line', on which he can establish new starting-points. The next one is Z, from which one can move in both directions, towards E and H; if again the item to be recollected is not in one of those points, then Γ will be assumed as the new starting-point and so forth, until the search is exhausted by reaching the extreme point A. In this sense, like in deliberation, the subject applies a strategy that put which conists in using the most items he can and tries to orientate himself within the disposition of the set of traces, whose knowledge the subject gradually restores as he goes along them again. With the imposition of this grid of metadata, one is able to map his experience and connect the different items in the same anamnestic chain. But, unlike deliberation, we must conceive this operation as not necessarily conscious, since the connections are essentially originated by physical alterations, which sometimes are out of our control.

Basically, Aristotle recognizes two main movements that contribute to map the bulk of traces one has: the usual ones, that are the vertical and horizontal lines in my reconstruction, connect items strongly related thanks to the 'laws of association' described at 451b18-20; the unusual ones, instead, are peculiar to each recollective act and are established only on the basis of a faint association by the subject. The 'middle line' plays this role of connection and allows

us to cover a wider range in our recollections. Comparing again this passage with 452a14-6 the unusual movement from Z to Γ can be conceived as the one from 'air' to 'fluid', while the more natural one from 'air' to 'earth' or 'water' may be represented by the one from Z to E or H.

In its general outline, my model roughly works like Sorabji's recognition of a place-system theory, but it has three advantages. It does not require to postulate complex techniques of memorization, which Aristotle does not even introduce and does not seem to intend as a central part of his treatment of recollection. Moreover, it avoids the problem of skipping from a middle-point to another ignoring the sides of the triplet, since the line drawn at the same time represents a figure construed by the subject and links pre-existing pieces of information embedded in the trace. In conclusion, it can be noticed how this interpretation suits Aristotle's remarks about the diseases that affect recollection: in principle, the more quick-witted the person is, the longer the 'middle line' will be (or rather the wider will be the area covered by his recollection) and the faster will the connections between the items present in the trace be. But in the case of the melancholics or of those who suffer from excessive moistness (453a14-31), the movements will be dispersed because of the impossibility of controlling them and the result will be an incessant, but inconclusive attempt to recollect; the same will happen to those who undergo a strong passion, like anger or fear, that directs their movements toward unwanted mnemonic objects, even preventing them from receding from the wrong movements. On the contrary, the physiological process entails a rigid control of all the phases of the search until the sought item has been recollected.

Conclusions

As I have tried to show, the *De Memoria* represents the first philosophical analysis of memory as a personal faculty, since the heavy use of analogies and metaphors by Plato and his ambiguous lack of commitment to them do not allow us to recognize a definite Platonic model in the *Theaetetus* or in the *Philebus*. However, Aristotle owes Plato some of the most successful analogies used to describe the physiological mechanisms of memory. In particular, the definition of memory as ἕξις ἢ πάθος of a perception or of a piece of knowledge (449b24-5) seems to be a 'scientifical' account of the model in the *Philebus*, which attributes two specific tasks to two different 'artists' in the soul.

On the one hand, with ἕξις Aristotle isolates the moment of retention of the memory trace, which in Plato was exemplified by the scribe. The scribe selects and encodes the stimuli from the outer world and his writing is made to last in the soul. Aristotle includes this operation in his model, but he uses the analogy of the imprint of the *Theaetetus* in order to exclude rationality from the selection: for Aristotle the objects directly influence the bodily support. Therefore, the only two variables of the system are the stimulus from the object and the bodily constitution that receives the imprint; however, since what is preserved is the form of the object, in some sense we can say that there is a process of encoding in the genesis of the trace.

Actually, encoding and decoding the language of the trace is the main problem for Aristotle's model, as I tried to show in the discussion of 450b11-451a2.[221] To the πάθος of the central organ that receives the imprint must correspond another one that allows the subject to represent it after some time has passed. Aristotle recognizes proportionality between the inner and outer objects as the criterion that bridges the two codes. Thus, the activation of the trace, common to memory and recollection, is based on decoding the temporal information together with the one related to the content. If I am right, this process is exemplified at 452b17-24.[222]

However, Plato's and Aristotle's achievements were possible only thanks to a traditional reflection on memory as cultural preservation and transmission, which provided them with some important instruments to describe memory as a personal faculty. On the one hand, the traditional methods of cultural transmission included some implicit conceptions that played a role for the philosophers, like the idea of inscription of a mnemonic token within somebody, the primacy of sight as the best vehicle for preserving a lasting and vivid impression and many others. On the other hand, Orphism and Pythagoreanism, which had a strong influence on

[221] Cf. above, pp. 91-6.
[222] Cf. above, pp. 96-103.

Plato's thought, had the role of focalizing memory on personal experiences and privileged an ascetic approach to restoring memories from former lives.

In this sense, Aristotle's place in an overall development of the conception of memory in ancient Greece is the forefront of the secularization of centuries-old practices which marked memory as possession of social power. This process began with Simonides and the sophists, who understood how mnemonic techniques could be exploited in a changing society. Aristotle does not seem interested in these aspects, if not (perhaps) in the very restricted field of dialectical debates. The emphasis some authors put on the elaboration of a mnemonic technique by Aristotle is excessive: I have argued that the interest Aristotle exhibited for the description of memory as a psychophysical capacity of individuals is the real originality of his account. My interpretation of 452a19-26[223] is an attempt at reconsidering this original contribution, the ancestor of the current interest in the bodily mechanisms of memory. In light of these considerations I believe that the passage 452a19-26 is primarily concerned with the application of an interpretative grid of metadata to the set of traces the subject possesses and only incidentally with the fact that a similar strategy can be used by a mnemonist to exploit the physiological model at its best.

In conclusion, with a suggestive analogy, Aristotle's idea of memory resembles at the same time a topographic and a magnetic account of the traces and of how they interact. One's set of memories is placed in a unique configuration given by one's personal experiences: in some sense they constitute a geography, in which the more relevant items appear like mountains in a landscape, which attract the activations and the anamnestic movements towards them; therefore, the objects neglected for a long time tend to be gradually 'submerged' and forgotten. However, this is a *personal* landscape, and an external 'observer' could be surprised by the unusualness of connections that can be made: for instance, if the recollective chain 'milk'-'white'-'air'-'fluid'-'autumn' (452a14-6) may be significant for someone, it may be a random selection of items for someone else. In my opinion, the recognition of this inner geography is an important Aristotelian achievement against a tradition that exalted *collective* processes of memorization as a means to transmit a cultural heritage, even if Aristotle's account can be considered a development of Plato's scattered intuitions into a coherent account. Of course, this consistency is not complete because of a sometimes obscure text, but Aristotle's conceptions remain a milestone for any theory of memory and recollection for his systematic approach to the phenomenon.

[223] Cf. above, pp. 103-8.

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